URBAN BATTLEFIELDS

Lessons Learned from World War II to the Modern Era

Edited by

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All maps drawn by Jeffrey Goldberg, Department of History, U.S. Military Academy, West Point, NY.

This book is dedicated to my father, who instilled in me from a young age a boundless fascination with the past.

Through his continuing enthusiasm for learning, he inspires me still.

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ABBREVIATIONS

AA & QMG assistant adjutant and quarter-master general [Canadian]

AAR after-action report

AHQ Army Headquarters Report [Canadian]

AK Armia Krajowa (Polish Home Army)

APC armored personnel carrier

AQI al Qaeda in Iraq

AT antitank

AUD anti–unmanned aerial vehicle device

BDFL British Defence Film Library

BMP boevaya mashina pekhoty (infantry fighting vehicle) [Russian]

CAR Canadian Armoured Regiment

CBC Canadian Broadcasting Corporation

CENTCOM (U.S.) Central Command [or USCENTCOM]

CIA Central Intelligence Agency

CIB Canadian Infantry Brigade

CID Canadian Infantry Division

CISE CENTCOM Intelligence Support Element

DHH Directorate of History and Heritage [Canadian]

DMT Directorate of Military Training [Canadian]

DND Department of National Defence

DPRK Democratic People's Republic of Korea

EQB Ezz al Din al Qassam Brigade

FBCB2 Force XXI Battle Command, Brigade and Below

FLIR forward-looking infrared

FM field manual

FRIES Fast Rope Insertion and Extraction System

FSB forward staging base

FSB Federal Security Service (of the Russian Federation)

GRF Ground Reaction Force

HMMWV High Mobility Multipurpose Wheeled Vehicle

HPE Hastings and Prince Edward Regiment [Canadian]

HQ headquarters

HUMINT human intelligence

IAF Israeli Air Force

ID infantry division

IDF Israel Defense Forces

IED improvised explosive device

IPB intelligence preparation of the battlefield

IRIN Integrated Regional Information Networks

IS Islamic State [or ISIS, ISIL]

ISIL Islamic State of Iraq and the Levant [or ISIS, IS]

ISIS Islamic State of Iraq and Syria [or ISIL, IS]

JDAM Joint Direct Attack Munition

JOC Joint Operations Center [Task Force Ranger]

JSOC Joint Special Operations Command

JSOTF Joint Special Operations Task Force

LAC Library and Archives Canada

LER Loyal Edmonton Regiment [Canadian]

LVT amphibious landing vehicle track

MC Military Cross

MFCS Mortar Fire Control System

MIA missing in action

mIRC Internet Relay Chat

MMG medium machine gun

MNF-I Multi-National Force–Iraq

MVD Ministry of Internal Affairs [Russian]

NCO noncommissioned officer

NPAM Non-Permanent Active Militia [Canadian]

OMON Special-Purpose Mobile Unit [Russian]

OP observation post

PALINFO Palestinian Information Center

PCAU Philippine civil affairs unit

POW prisoner of war

QRF quick-reaction force [UNOSOM II]

RAF Royal Air Force

RCA Royal Canadian Artillery

RCR Royal Canadian Regiment

RCT regimental combat team

ROK Republic of Korea

RPG rocket-propelled grenade

SDF Syrian Democratic Forces

SNA Somali National Alliance

SOE Special Operations Executive [British]

SS Shutzstaffel (Protection Squads) [German]

SVBIED suicide vehicle-borne IED

SWT scout weapons team

TASS Telegraphic Agency of the Soviet Union

TF task force

UAV unmanned aerial vehicle

UN United Nations

UNOSOM United Nations Operation in Somalia

UNRWA United Nations Relief and Works Agency

UNSC United Nations Security Council

USCENTCOM U.S. Central Command [or CENTCOM]

USFORSOM U.S. Forces in Somalia

USSOCOM U.S. Special Operations Command

USSR Union of Soviet Socialist Republics [the Soviet Union]

VBIED vehicle-borne improvised explosive device

WD war diary

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INTRODUCTION

THE ROLE OF HISTORY IN UNDERSTANDING MODERN URBAN WARFARE

HISTORY IS an imperfect but indispensable tool for understanding war. Military officers, policymakers, researchers, and others who want to learn about war must use history as the source of data for analysis and as a laboratory for learning, since it is not feasible to conduct controlled experiments to develop immutable truths about war.[1] As the Prussian military theorist Carl von Clausewitz noted, "historical examples clarify everything and also provide the best kind of proof in the empirical sciences. This is particularly true in the art of war."[2] This endorsement of historical study for learning is especially important for military professionals, who often spend more time in noncombat than in combat duties. Even military officers with substantial combat service must rely on history, because their previous experiences are often insufficient to inform their present circumstance, in different terrain conditions and facing a different adversary. Moreover, previous experience at a junior rank is frequently inadequate for informing combat judgments at more senior ranks. The contemporary U.S. Army is finding that its vast combat experience against insurgents in Iraq and Afghanistan does not fully prepare it to fight regional powers with comparable capabilities.

Militaries rely on history, with its inevitable flaws, as the best source aside from personal experience for learning about war. Developed militaries invest heavily in training exercises to validate soldiers' ability to conduct tactical maneuver, but the most robust and most realistic training event cannot replicate the violence and confusion of combat. Improvements in modeling and simulations significantly facilitate learning without actual combat. Similarly, advancements in instrumentation and data collection have allowed combat training centers to improve learning in training. However, simulations and training are only as good as the scenarios they replicate, which inevitably come from past conflicts and often fail to anticipate future conditions.[3] Any training event, simulation,

or war game will be a flawed representation of battle. For these reasons, and despite the continual changes in the means and ways of warfare, history remains a preeminent source for understanding war.

Historical examples can explain ideas, show the application of ideas, demonstrate what is possible, and enable one to deduce doctrinal principles. Yet applying lessons gleaned from previous battles does not guarantee success in future engagements. Too many military leaders and analysts draw their "lessons" of history from a circumscribed or biased set of cases selected to illustrate a chosen point. Learning should occur from rigorous testing and thorough research. The value of history for understanding war lies not in finding one emblematic case but rather in deeply analyzing a broad array of cases. No battle is just like any other, yet an objective and close examination of battles will reveal patterns whose "study permits educated guesses about the range of potential outcomes." Even so, such study does not produce immutable lessons, only broad principles or generalizations. Importantly, a close study of past battles should illuminate the inherent complexity in all warfare and thus the value of closely examining context to find the uniquely relevant aspects of any particular battle. In this regard, the study of history serves its most important role in prompting the student to ask important questions.

Those seeking to learn sound military principles from past battles must guard against assuming that history will repeat itself, or that the future will replicate the past. Rather, the study of past battles should highlight the unique contexts involved, which may include political, technological, economic, or social conditions. Such study is not intended or desired to produce specific formulae or principles. Rather, the study of past battles is an exercise in improving judgment. Thus, history often is the best means of understanding the art and science of applying military power or conducting military operations. "For after all allowances have been made for historical differences, wars still resemble each other more than they resemble any other human activity." Michael Howard further argues that military history must be studied in width (over a long historical period), in depth (thoroughly examining given campaigns), and in context (with appreciation for the environment of the time). This introductory chapter seeks to provide the necessary width to supplement the depth and context offered in the subsequent case analyses. While this collection may not make anyone more prepared for the next urban battle, ideally it will make readers wiser about all urban battles.

In that spirit, the contributors to this volume have offered a series of case studies from the modern era that invite the astute reader to examine particular contexts while collecting useful generalizations. By "modern," we mean since industrialization began to allow for the mass production of weapons and thus the equipping of large fielded formations that relied on institutions of doctrine writers and training facilities—more than a century and a half. A span of time so large cannot claim to hold constant the factors of technology, doctrine, organizational structure, social norms, demographics, or any of the myriad variables

that influence combat outcomes. Similarly, it will omit potentially critical or certainly well-known cases. Nevertheless, the contributors, by examining critically some often-overlooked case studies and exploring some well-known instances of urban warfare from new perspectives, have created for readers an opportunity to illuminate contemporary challenges.

The volume's editor, Gregory Fremont-Barnes, begins the study with a close examination of a nineteenth-century battle that does not typically arise during urban-combat discussions. Drawing on his deep understanding of the historical record, he illuminates the challenge the U.S. Army experienced in attacking the Mexican city of Monterrey in 1846. This battle illustrates how, given the omnipresent difficulties of tactical maneuver inside congested urban spaces, operational maneuver around them is essential to set conditions that allow the forces inside the city to retain the initiative.

Jayson Geroux and Lee Windsor leverage their understanding of the Canadian Army to present a compelling case of militaries learning from their experiences by recording them in doctrine for future generations. They show potential pitfalls of lesson transmission by recounting the Canadian Army's effort to dislodge the Fallschirmjager (paratroopers) from fortified Ortona on the Adriatic coast in late 1943. Overshadowed as the battle for Ortona is in the wider historiography by the epic battle waged in Stalingrad earlier that year, it was there that Canadian forces developed "mouse-holing" tactics to advance through building walls instead of down city streets and integrated tanks and infantry into effective combined-arms platoons for mutual survivability. This case study also demonstrates how the dense urban terrain forces centralized operations, which in turn makes essential the role of the operational headquarters in facilitating dynamic task organization to create the combined-arms platoons necessary for tactical success.

The classic clashes of industrial armies in cities throughout World War II have caused many to look past the Poles' ill-fated Warsaw Uprising for important lessons about urban combat. However, Keith Dickson displays his sophisticated understanding of irregular warfare by highlighting a case best known for Wehrmacht atrocities. Encouraged by signs of the Germans' departure as the Soviet Army advanced westward, the underground Polish Home Army of 48,000 irregulars sought to eliminate the final 16,000 German forces in the city. As the uprising commenced, however, the Soviet advance halted, and German forces used their superior firepower and command systems to suppress viciously the uprising. This case study demonstrates the enduring importance of capital cities for all sides and the challenges irregular forces face sustaining an urban fight against regular foes—even when inflicting substantial losses on them. Keith Dickson also analyzes the challenges facing the British and Americans in supporting the Polish Home Army in the isolated city.

Similarly, the extensive historiography of Operation Overlord focuses on the seemingly impossible task of securing beachheads, the daring of nighttime airborne drops behind enemy lines, and the challenge of linking amphibious and

airborne forces in the face of Wehrmacht opposition. William Taylor expands this narrative in important ways by recounting the importance of Cherbourg and Saint-Lô in this campaign. This case study underscores the enduring importance of cities for their infrastructure and transportation nodes, both important enablers of forces engaged in modern warfare. Sustainment undergirds all military forces, but industrialized forces must control resources that almost always reside within cities. The battles for Cherbourg and Saint-Lô also highlight the importance of operational maneuver outside the city to support tactical movement inside it, the use of misinformation, and the problems posed by noncombatants.

Brian Drohan, a soldier, historian, and professor, presents the fourth case study of urban combat from World War II, the only one from the Pacific theater, Manila. His study explores the endemic difficulties of delivering the massive quantities of firepower necessary in most urban battles while simultaneously protecting the civilians trapped in the city. Manila was neither the first nor the last battle in which American commanders restricted artillery and aerial bombardment in order to limit civilian deaths and damage to infrastructure only to loosen incrementally those restrictions as mounting casualties ground down their formations. Importantly, this case study also illustrates how civilian considerations impact planning for urban battles beyond considerations of firepower.

The size, complexity, and ferocity of the battle of Seoul is even more remarkable when considering that four months earlier the U.S. Army had no plans for or expectations of fighting a major war in Korea. Drawing from a rich mix of primary and secondary sources, Eric Setzekorn sketches the operational challenges of controlling a complex multinational, joint operation with an ad hoc headquarters. In doing so, he reinforces important observations about the importance of isolating a city, sustaining units through the rigors of urban combat, organizing combined-arms operations by platoons and squads, and planning for the humanitarian assistance that will be necessary during and after an urban battle.

Few recent urban battles have made their way so deeply into American folklore, given the popularity of Black Hawk Down, as the battle of Mogadishu. While the book and movie rightly focus on the heroism of many American soldiers and the challenges of tactical decision-making in urban battles, Frank Jones deftly draws on his experiences developing and teaching strategy to expand that narrative to the political and strategic significance of the battle. In doing so, he reminds us that urban battles almost always capture the attention of policymakers in ways that engagements outside of cities often do not. Yet, the reaction of policymakers to this battle was novel in that it marked the onset of a pervasive and instantaneous media coverage that was quick to permeate Western societies. This case study draws important attention to the fact that the battle on October 3, 1992, resulted from the seventh raid Task Force Ranger had conducted in Mogadishu, emphasizing the inherent contingent and unpredictable nature of military operations in cities.

Coming quickly on the heels of the U.S. debacle in Mogadishu, the Russian losses in Grozny in December 1994 seemingly heralded a new age in which insurgents would use urban terrain to neutralize the technological capabilities of sophisticated militaries. However, as Keith Dickson points out in a second contribution, the Russian Army of 1994 was a shell of the former Soviet Army that had stood toe to toe with the U.S. Army across the Iron Curtain a decade earlier. The Russian Army's lack of professionalism in basic training and preparation for its attack into Chechnya preconditioned its initial disastrous performance, highlighting that any military that seeks to achieve its objectives in a city must devote substantial time to preparation. The Russians seemingly learned this lesson after their humiliating departure from Chechnya in 1997; their second attack into the restive republic, in 1999, was a different experience, marked by an immediate and continuous reliance on overwhelming firepower. The fighting in Grozny underscores the value of massive firepower for urban fights, especially if one is unconcerned with civilian casualties and collateral damage.

The American operations in Falluja in November 2004 offer an interesting contrast to the battles in Grozny. U.S. forces learned from an abortive operation, in April 2004, that urban fights require intense planning and substantial firepower. The Fallujah battle is unique for how U.S. forces and the Iraqi government convinced a preponderance of the city's population to leave, allowing a less restrictive use of firepower than would have been allowed otherwise. Douglas Winton uses this case study to demonstrate that advanced militaries can effectively employ their technological and firepower advantages in cities if they commit themselves to detailed and extensive preparation.

In his analysis of the Israeli Defense Forces' experience in Gaza, Wesley Moerbe focuses on the issues that urban battles create for commanders in the information environment, especially in the age of ubiquitous correspondents (formal and informal) with seemingly endless global media outlets. The battles in Gaza highlight that the narrative will be constructed not after the fighting stops but in real time, in front of a global audience, before, during, and after the battle. As long as this state of affairs persists, units that fight in cities will need to be as mindful of the narrative impacts of their operations as they are of the physical effects. For Western militaries this will require increased understanding of the law of armed conflict and an ability to analyze a wide array of diverse audiences.

Edward Salo concludes the analysis of urban battles, examining the asymmetric tactics used by the Islamic State in Raqqa to counter the technologically advanced conventional capabilities of the United States and its partners. This examination points to the enduring reality that urban terrain amplifies the advantages of the defense. Forces that cannot in open terrain mount a credible defense or significantly delay a technologically superior force can do both when they burrow into cities. As Islamic State forces showed, this effect can be furthered when the defender has no regard for the lives of noncombatants or concern about collateral damage. This asymmetry of values amplifies the efficacy of asymmetric tactics and capabilities.

These battles are not presented as the "high points" of the canon of urban battles or as exhausting the subject. There are scores of important urban battles that occurred concurrently with these that invite study by serious students of warfare.[1] In due course, no discussion of urban combat will be complete without objective analysis of the actions in progress at this writing in and around Kiev, Kherson, Mariupol, Bakhmut, and Gaza. The breadth of cases examined in this volume underscores that urban combat results from and occurs in varied and disparate conditions, making it hard to discern unvarying truths that can guide policy choices, doctrine, or force development. No conclusion about urban combat can be applicable in every situation—context matters. Yet this collection does contribute to the solidification of many important ideas about urban fighting and how it is different from fighting in open battlefields. For instance, battles in cities often require more time and more resources than otherwise would be anticipated. The synthesis of these ideas can be categorized as myths of urban combat, lessons of combat applicable across multiple types of terrain, and generalizable lessons of urban combat.

URBAN COMBAT MYTHS

Force Ratio: Attackers Need a Disproportionate Numerical Advantage

Soviet urban warfare doctrine and some Western analysts have asserted that a force attacking into a city needs to outnumber the defending force by six to one, a ratio twice as high as that generally assumed for comparable forces engaged in open terrain. As Brian Drohan describes, in Manila in February 1945 the U.S. forces had a substantial numerical advantage over the poorly trained and equipped Japanese forces they faced yet failed to achieve the quick victory they anticipated and reluctantly turned to destructive firepower. Initially, U.S. forces did not complement their numerical strength with superior firepower because

they discounted the Japanese determination to hold the city. However, as the American experiences in Aachen (1944) and Hue (1968) demonstrated, firepower can offset a numerical disadvantage; U.S. forces eventually retook those cities from comparably sized or larger opponents. Force-ratio analysis makes sense as a predictor of battle outcomes only when one has a high degree of confidence that the two belligerents in the battle have comparable capabilities and will; otherwise, too many variables aside from troop strength influence the military capability of each.

Urban Combat Means High Casualties

That urban battles tend to produce high casualties was a common observation in the Western media prior to the launch of Operation Iraqi Freedom. Journalists covering the U.S. military's preparation for the war had ready access to a plethora of military doctrine and to commentators who could cite recent studies to bolster this view. Much of the literature about urban combat emphasizes how urban terrain impedes unit dispersion so that a single explosion causes more casualties, creates more engagements at close range at which the likelihood of accurate small-arms fire is increased, produces building debris that

expands the sources of wounding material in detonations, and lengthens casualty evacuation times. One analytical study of American casualties in the battle of Hue found confirmation that the casualty rate is higher in urban fighting than in jungle fighting; yet a subsequent study of U.S. Army engagements in World War II drew the opposite conclusion. Casualty rates often reflect more the skill and determination of the belligerents than the type of terrain over which they fight. Urban battles are likely to cause high casualties when the city's defenders are willing to fight and the attackers have insufficient firepower to support a methodical advance. Eric Setzekorn points out that North Korean defenders in Seoul did not cause significant American or South Korean casualties because they were unwilling to stay and fight. Choosing to attack a city need not sentence the force to, or preordain, high casualties. Urban terrain amplifies the inherent advantages of the defense but cannot independently translate those advantages into more casualties.

Cities Can Be Bypassed

The conclusion that armed forces should bypass cities flows naturally from the foregoing. Yet even if disproportionate force ratios and high casualties always occurred, there are myriad reasons why an attacking force would need to enter a city. The U.S. Army wanted to bypass Aachen during World War II and destroy the Wehrmacht in the field, but Aachen's German defenders stubbornly refused to leave, forcing the Americans to address the threat in their rear. During the Korean War, as Eric Setzekorn concludes, attacking into Seoul was essential to reinstate the government of the Republic of Korea. During the Vietnam War, U.S. and South Vietnamese forces felt compelled to evict North Vietnamese and Viet Cong forces from Hue to avoid losing prestige, even if it required destroying the city. The American invasion of Panama in 1989 was predominately an urban fight, because all of the Panamanian Defense Forces securing the Noriega regime were at sites that mattered, which were all in cities. Similarly, we see in Frank Jones' description of the Mogadishu battle that it was impossible to arrest Aideed without engaging the militias in the city. History is replete with examples of urban fights; any serious military must abandon hope of avoiding city battles, notwithstanding Sun Tzu's timeless wisdom to lure your opponent out of the city if possible.

GENERALIZABLE URBAN COMBAT INSIGHTS AND PRINCIPLES

Insights and Principles Consistent across All Terrain

Skill and will are critical variables in any military engagement. The force with better weapons, munitions, leaders, training, doctrine, and tactics generally wins the battle. Similarly, in battles in which there is a disparity of will, the more determined (and consequently more innovative or adaptive) force typically prevails. Urban terrain cannot compensate for incompetence or halfheartedness. Brian Drohan describes how an outnumbered and poorly trained but determined Japanese force was able to delay substantially American efforts to retake Manila. Yet, this case contrasts with how, in Eric Setzekorn's description, North Korean

forces essentially melted when U.S. and South Korean forces threatened their lines of communication. The North Koreans quickly retreated through Seoul rather than fight to retain it. Similarly, the Iraqi Army during the Gulf War in 1991 lacked both the skill and will to convert their seizure of Khafji into an advantage and quickly surrendered its gains and retreated.

Militaries that have effective mechanisms for fighting with combined arms are more successful than militaries dominated by single services or branches. Combining multiple capabilities and functions into one coherent force increases combat effectiveness. This is especially so for units that fight in cities. City fights require a great deal of infantry to hold ground, but that infantry requires the support of armor, with its firepower and protection. Yet armor alone is very susceptible to closerange attacks from blind spots that can be covered only by infantry. These infantry/armor teams will often need artillery to suppress snipers and engineers to remove obstacles. The Canadian Army effectively fought with combined arms in Ortona and achieved decisive results, whereas the absence of combined arms contributed to U.S. losses in Mogadishu.

The advantage of the defense over the offense is a timeless principle—a truism acknowledged even by Clausewitz. Attacking forces must achieve objectives, while defending forces simply need to prevent the attackers from achieving them. Attacking forces must often move over greater distances and expose their lines of communication, while defending forces can remain stationary and commit smaller forces to secure their logistics. These advantages are magnified in a city fight, where the static nature of its task allows the defending force to select from a wide variety of covered and concealed positions, which maximizes their surveillance coverage and opportunities for ambush or surprise. Further, defending forces typically have a better understanding of the terrain and closer relationships with residents; this facilitates their operations, including evasion and reliable networks of spies and saboteurs. Although a well prepared and equipped attacker can overcome a defenders' advantages, all the cases in this volume suggest that inferior defenders are better able to hold terrain or slow an attacker's progress when fighting from within cities than outside. Defenders who are outgunned or outmanned have strong incentives to collapse into cities.

Intelligence is an essential enabler of all operations, but especially in cities. The close and compact nature of urban terrain causes many close-range engagements, often with little warning. The force that can accurately determine its adversary's location, strength, and disposition has a marked advantage in these engagements. Once inside a city, each force must assume it is constantly under the observation or surveillance of its adversary and thus is never safe, especially at present, considering the accessibility of satellite and drone surveillance and sophisticated means of monitoring communications. Because the population density in cities is so high, human intelligence offers a premium return in a city, in comparison to operations in more open terrain. Crafty belligerents will obscure their locations and movements, often inside buildings or in the substructure, and avoid communications subject to monitoring. Yet the ubiquity of

people in a city offers countless opportunities for intelligence gathering. Frank Jones' description of the fighting in Mogadishu most clearly draws out the costs of underinvesting in intelligence.

Generalizable Insights and Principles of Urban Combat

Because tall buildings impede communications and narrow streets force units to break contact with their flanking units, in urban fights, small units operate more or less independently and often cannot provide effective mutual support. Commanders have difficulty tightly controlling subordinate units' actions, because they cannot see the units and often cannot communicate with them. To maintain tempo, commanders must accept decentralized control in cities. Inability to conduct decentralized operations contributed to German defeat in Stalingrad and Aachen and to North Korean defeat in Seoul.

Units move more slowly in urban terrain than they do in open terrain. The buildings and narrow streets create blind spots and restrict ability to see in all directions, forcing units to clear methodically each segment of their routes. Streets enable quick movement but are easily observed, and units traversing them are susceptible to ambush. This forces units to break through walls or move through substructure to travel without being observed. Jayson Geroux's and Lee Windsor's detailing of the Ortona battle emphasizes "mouse-holing," but the tactic is used repeatedly. Alternatively, advancing units can rely on firepower to demolish known and suspected defensive positions, but the resulting rubble further blocks and slows them. Additionally, the three-dimensional quality of the terrain obliges units to clear the stairwells of multistory buildings and the substructure of tunnels and sewers beneath. The requirement to leave forces behind to hold cleared terrain multiplies manning requirements, making urban operations more manpowerintensive as well as slower than normal operations.

Cities offer ready-made fortifications for defenses; attacking forces will need substantially more firepower in a city to reduce them. Units that try to maneuver without supporting fire will find themselves repeatedly, if not continually, exposed to well-placed ambushes and snipers. This increased reliance on firepower creates a substantial logistics burden. Brian Drohan describes how U.S. forces, despite a strong desire to spare infrastructure from destruction, eventually reverted to firepower-intensive attacks into Manila.

Even with constrained and precise firepower, urban combat invariably destroys infrastructure. In the best cases, the civilian population leaves, as occurred in Fallujah, so that the preponderance of casualties are suffered by the combatants. When civilians remain in the city, there are no effective means for preventing casualties among them. Even when the people have left the urban battleground there is a substantial human cost, since people rely on the city's infrastructure for vital services. The burden of providing those services during and immediately following the fighting temporarily shifts from civilian to military authorities. This point influenced how U.S. forces approached Manila. There is no way to avoid the civil cost of an urban battle.

Operating in a city requires units to use tactics and equipment not required in the open. The closely subdivided nature of the terrain reduces the standoff distance available to long-range weapons. Units that want to advance through cities often rely on bulldozers as weapons to clear obstacles and barricades. City fights require intricate and refined battle drills for clearing buildings, modifications to weapons to engage targets effectively at very short ranges and extreme angles, and increased reliance on hand grenades for blind spots and on explosives for creating breaches in walls and barricades. Units that do not deliberately prepare for a battle in a city must adapt quickly or fail.

Liberal democracies, which tend to be technologically advanced, prefer to avoid urban combat and its inevitable noncombatant deaths, collateral damage, and widespread human suffering. Yet the historical record reveals that urban battles are often fought, despite reluctance on one side or both. Global urbanization trends are reducing the prevalence of politically important areas that are nonurban and thus indicate a growing propensity for urban battles. Anthony King has argued that the shrinking of militaries, especially among Western countries, increases the likelihood of combat occurring in cities.[11] Finally, as we have seen, outgunned or outmanned forces can improve their chances in a city. Given these realities, industrial militaries should anticipate that their less-capable adversaries are likely to attempt to establish urban defenses. Sun Tzu's advice remains sound, but responsible militaries must accept that their stratagems to entice adversaries out of cities will not always succeed. Urban combat is not inevitable, but militaries that want to prepare for a wide range of possibilities will be wise to prepare for it.

Since the first urban battles, military commanders have understood the tremendous costs associated with fighting in a city. These costs prompted Sun Tzu to advise commanders to exhaust alternatives first, and incentivized militaries to develop doctrine to bypass built-up areas. Yet history shows, and reasoned consideration of the future anticipates, that some urban fights are necessary. Aside from the advantages of urban terrain to some adversaries, some cities hold military or political significance that simply cannot be ignored or abandoned.

Yet there is a limit to what past battles can tell us about future ones. The study of history prompts us to look for what is dissimilar or discontinuous as much as for what is similar or continuous. Initial indications are that urban combat in the twenty-first century will be quite dissimilar to past battles, even from those examined in this study. The rapid diffusion of information technology makes every battle one with potential for near-instantaneous global effects. Almost anyone can record and transmit combat actions instantaneously from almost anywhere on the globe. Simultaneously, increases in weapons ranges and improvements in reconnaissance and surveillance capabilities are forcing military formations into smaller and more decentralized units. These factors decrease the prospect that decisive battle will be the path to unequivocal victory or defeat that national leaders and military commanders sought centuries ago. With the results of each tactical action now potentially known globally within min-

utes, it seems increasingly unlikely that any engagement will be decisive yet, paradoxically, increasingly likely that any engagement could be. Inferior forces looking to engage high-tech militaries will probably continue to turn to the urban battlefield for the defensive advantages it offers. As in the past, military actions in cities are likely to be disrupted by the fog and friction inherent in all military operations but amplified in urban environments. Ultimately, success in urban combat will most likely accrue to the force that has invested in equipment and doctrine suited to the unique terrain and prepared itself to adapt to the unexpected.

Anyone studying the case studies in this volume or others from the extensive literature of urban combat will find examples to support or discount any particular generalizable truth on the subject. Ultimately, the value of this volume is not that it establishes what is true about urban combat but that it illuminates what is possible or probable. The astute reader will spend some time recording important observations but even more time pondering such important questions and challenges as

How do military forces adapt to the rigors and surprises of urban combat?

How can firepower be employed to enable tactical maneuver while minimizing noncombatant deaths and collateral damage?

How do military forces rapidly establish effective platoon- or squadlevel combined-arms teams?

What are the best tactics for maneuvering in a city?

How can urban operations be expedited so as not to exhaust political tolerance?

How can the extensive intelligence necessary for urban operations be collected and analyzed?

How are forces to be apportioned among isolating the city, conducting deception operations, and executing decisive operations inside the city?

How can soldiers best be prepared for the rigors of urban combat?

How should units be prepared to cross and operate on the rivers that are found in nearly every city?

How can units be prepared to advance effective narratives for multiple operations while conducting combat operations?

The case studies that follow offer ample opportunity to consider these issues.

NOTES

1. Maurice Matloff, "The Nature of History," in A Guide to the Study and Use of Military History, ed. John E. Jessup Jr. and Robert W. Coakley (Washington, DC: U.S. Army Center of Military History, 1978), 3–24. Edward Luttwak described military history as "the only possible 'data-base' for those who would understand war"; Edward Luttwak, "A New Arms Race?,"

Commentary, September 1, 1980, https://www.commentarymagazine.com/ (accessed October 19, 2023).

2. Carl von Clausewitz, On War, trans. and ed. Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1976), 170.

3. As a case in point, U.S. Army attack aviation doctrine developed to support AirLand Battle called for AH-64s to conduct "deep attacks" against Soviet second-echelon forces. This concept was validated during Operation Desert Storm. However, the training exercises conducted throughout the 1990s failed to anticipate the Iraqis' use of cellphones to track advancing helicopter formations and the AH-64s' vulnerability to small-arms fire, resulting in a failed deep attack during Operation Iraqi Freedom in 2003. See Todd G. Thornburg, "Army Attack Aviation Shift of Training and Doctrine to Win the War of Tomorrow Effectively" (master's thesis, Marine Corps University, 2009), https://apps.dtic.mil/sti/pdfs/ADA519290.pdf (accessed October 19, 2023), and Douglas T. Lindsay, "US Army Attack Aviation in a Decisive Action Environment: History, Doctrine, and a Need for Doctrinal Refinement" (master's thesis, U.S. Army Command and General Staff College, 2015), https://apps.dtic.mil/sti/pdfs/AD1001526.pdf (accessed October 19, 2023).

4. Clausewitz, On War, 171.

5. Thomas E. Greiss, "A Perspective on Military History," in Jessup and Coakley, Guide to the Study and Use of Military History (Washington, DC: Center of Military History, 1978), 25–40.

6. MacGregor Knox, "Continuity and Revolution in Strategy," in The Making of Strategy: Rulers, States, and War, ed. Williamson Murray, MacGregor Knox, and Alvin H. Bernstein (Cambridge, UK: Cambridge University Press, 1994), 645.

7. Clausewitz, On War, 517.

8. Michael Howard, "The Use and Abuse of History," Royal United Service Institute Journal 107 (February 1962): 4–8; repr. Parameters 11, no. 1 (March 1981): 13.

9. Howard, "Use and Abuse of History," 14.

10. For example, Paris (1871), Madrid (1936), Shanghai (1937), Stalingrad (1942–43), Caen (1944), Brest (1944), Aachen (1944), Athens (1944–45), Mandalay (1945), Budapest (1945), Berlin (1945), Algiers (1957), Aden (1967), Jerusalem (1967), Saigon (1968), Hue (1968), Belfast (1969–2007), Suez (1973), Khorramshahr (1980 and 1982), Panama City (1989), Khafji (1991), Sarajevo (1992–95), Jenin (2002), Baghdad (2003), Basra (2003), Bint Jbeil (2006), Sadr City (2008), Ramadi (2015–16), Mosul (2016–17), and Marawi (2017). The historical record on these and other battles is rich and worthy of serious study. See Gregory Fremont-Barnes, ed., A History of Modern Urban Operations (London: Palgrave Macmillan, 2020).

11. Anthony King, Urban Warfare in the Twenty-First Century (Cambridge, UK: Polity, 2021).

EASTERN MONTERREY

Map redrawn from Christopher D. Dishman, A Perfect Gibraltar: The Battle for Monterrey, Mexico, 1846 (Norman: Oklahoma University Press, 2011), 122

GREGORY FREMONT-BARNES

1

NINETEENTH-CENTURY PRECEDENT

The Battle of Monterrey, September 21–24, 1846

FOUGHT DURING THE WAR between the United States and Mexico (1846–48), the battle for Monterrey offers an instructive study of the problems associated with urban combat. It is a case in which prohibitively heavy casualties obliged the attacker to adapt his tactics quickly with a view to overcoming a defender whose strong, often elevated, defensive positions rendered impossible conventional assaults down narrow city streets.

After defeating the Mexicans at the battles of Palo Alto (May 8, 1846) and Resaca de la Palma (May 9) in southern Texas, Maj. Gen. Zachary Taylor, commander of U.S. forces in the field, crossed the Rio Grande on May 18 in a slow but deliberate advance into northern Mexico in pursuit of forces that ultimately established a strong defensive position in the city of Monterrey, the state capital of Nuevo Leóne. In a bid to persuade the Mexican government to reach a negotiated settlement, President James Polk and the War Department ordered Taylor to capture the city, with its approximately ten thousand residents. He entered the northern outskirts in late September with approximately 6,200 men. Laid out in a grid system of narrow streets lined by substantial limestone houses with flat roofs and short walls, Monterrey posed a formidable barrier on the road to Mexico City, deep in the interior of the country. Taylor could not take the place by siege, since he lacked the requisite heavy artillery, and he could not bypass it, because its large garrison would be capable of harassing Taylor as he advanced deeper into Mexican territory or of threatening his logistic tail extending back across the border. Besides, Washington demanded a short, decisive campaign: the city must be taken and taken without delay.

Lt. Gen. Pedro de Ampudia, commander of the Mexican Army of the North, with recently arrived reinforcements, led a force of approximately 7,300 men. Over many preceding weeks it had prepared defensive positions dotted across the city, such as the Citadel, an unfinished church slightly north of the city. To the northeast stood an earthwork known as “La Teneria” (The Tannery), while at the eastern end of the city lay Fort Diablo. The western approach to the city was protected by Fort Libertad on “Independencia” (Independence Hill), while farther south lay Fort Soldado on the summit of “Federacion” (Federation Hill). While all strong positions, they did not mutually support one another, and this

isolation, together with the Mexicans' lack of sufficient troops to defend the ground between them, rendered them vulnerable to capture in succession.

On September 19, with a view to ascertaining the best direction from which to assault the city, small parties of American topographical engineers began to reconnoiter the western approaches and the substantial plain to the north, bounded by fields of corn and sugarcane. Prisoners taken by Texas Rangers over the preceding days contributed further useful intelligence, including of the number of guns and troops in the city and, in some cases, their locations. The scouting parties near the eastern part of Monterrey found operating in that area more difficult than those closer to army headquarters at a place just north of the city that the Americans dubbed "Walnut Springs." They had longer rides, across potentially contested ground, to the eastern area, where thick fields of corn and sugarcane obliged them to dismount and crawl forward to obtain an unobstructed view of the city.[1]

At Taylor's council of war late on the 19th, his staff agreed on the practicability of an assault against the northern and western side of the city, to be carried out in a large hook movement. By so doing the Americans hoped to control the Saltillo Road, depriving the garrison of its only immediately available source of reinforcement and resupply, the town of Saltillo. Possession of the road would also enable Taylor to sever the Mexicans' line of retreat from Monterrey and thus perhaps precipitate the capitulation of Ampudia's entire force. With these ends in view, Taylor entrusted the task to his most trusted subordinate, Brig. Gen. William Worth, commander of the Second Division, a force consisting of two thousand men, including a regiment of mounted Texan volunteers. Worth's men departed at noon on the 20th, moving west through corn and sugarcane and across irrigation ditches and chaparral, aided by engineers who cut through fences and laid improvised bridges across streams, rivulets, and ravines to allow the passage of artillery and ammunition caissons.[2]

Worth moved along the extreme north side of the plain, all the while observed by Mexican troops on Independencia, an elevated feature on which stood a formidable structure known as the "Obispado," or Bishop's Palace. Worth's route had been a deception; when in due course he reached the Pescaria Grande Road, which entered the city from the north, his force instead turned south down a smaller road. The Mexicans responded by dispatching men down the south side of Independencia, where they concealed themselves in cornfields near the path of the approaching American column. Artillery deployed on the hill began to fire on the leading element. Worth's force halted and established a camp beyond the range of the guns with the intention of launching a full-scale attack on the western side of the city the following day. Mexican cavalry approached, but a combination of small-arms fire and approaching darkness averted any serious fighting.[3] That evening, Worth wrote to Taylor requesting a diversion be undertaken the following day, in the form of a feint to the northeast to draw Mexican forces from the formidable defenses on the western side of the city. Worth thought a day's diversion sufficient to enable him to seize

Independencia and the Saltillo Road, which he believed the Mexicans could regain only at substantial cost. The same night, the 20th, at Walnut Springs, the First and Third Divisions plus a combination of regulars and volunteers prepared themselves for an assault on the following day.

OPERATIONS AGAINST WESTERN MONTERREY, SEPTEMBER 21

At dawn on the 21st, a 10-inch mortar and two 24-pounder howitzers in a small depression 1,400 yards from a strongpoint known as "the Black Fort" opened fire, first on that position and its nine guns and then against the Citadel and its San Patricio Battery, but the distances proved too great and shot fell short. Without gun positions closer to their targets and lacking heavier-caliber artillery, the Americans possessed no means of bombarding targets at considerable range, thus leaving the infantry no alternative but to launch an assault without artillery support.

Worth moved his troops from Walnut Springs toward the Saltillo Road, where they encountered a mixed force of 1,500 Mexican infantry and cavalry near San Jerónimo. Texan volunteer cavalry, armed with Colt revolvers and supported by infantry fire, initiated a fifteen-minute action in which they drove off the mounted Mexicans, who suffered extraordinary losses of 150 killed or wounded at the trifling cost of a single American. Following the action, most of the Mexican infantry retreated to the western base of Independencia, on which it will be recalled stood the Obispado, the key to the defense of western Monterrey. A second, less prominent elevated position, Federacion, with its two guns, also dominated the area. Moving his column west of the Saltillo Road beyond the range of the artillery, Worth prepared to attack Federacion and Independencia.

A force of half regulars—the 5th and 7th Infantry Regiments—and half Texas volunteers ascended the four-hundred-foot Federacion, which contained two forts, Federacion and Soldado, some of whose hundreds of defenders descended the hill to take up positions behind rocks and bushes. The artillery had already inflicted some casualties during the Americans' distant approach, but as Worth's troops neared the base of the hill the Mexicans could not depress their guns sufficiently. Their assailants exchanged fire with the infantry on the hillside as they slowly climbed the slopes, using chapparal and rocks for cover. Reinforcements, in the form of the as yet uncommitted half of the 5th Infantry and the Louisiana Volunteers, went up the south side of the hill to support the assault, which came under increasingly intense small-arms fire. However, as the Americans reached the summit the Mexicans fled from Federacion eastward to Saldado, a stone structure on the eastern end of the hill. Both American columns converged there virtually simultaneously, causing the Mexicans to flee down the hill toward the city or across the valley to the Obispado. The assault had cost eighteen American wounded, two mortally so, and an unknown number of Mexicans, who abandoned two guns, equipment, and supplies. Nightfall brought a close to the fighting in this concentrated area of western Monterrey, with the Obispado still in Mexican hands.

OPERATIONS AGAINST EASTERN MONTERREY, SEPTEMBER 21

To divert attention from Worth's assault on western Monterrey, at 8 a.m., Col. John Garland (in the absence of the commanding officer, Gen. Daniel Twiggs, who was ill) assembled his forces on the plain to the north and prepared to march into the northeastern part of the city. The First Division, consisting of the 1st and 3rd Infantry Regiments—both regular units of the U.S. Army—and a battalion of Maryland and District of Columbia Volunteers, soon came under the observation of the fortified La Teneria, whose garrison of two hundred men under Col. José Maria Carrasco had spent the previous night preparing platforms for their 4- and 8-pounder guns and a small howitzer. Shortly after commencing its march, Garland's column came under fire from artillery in the Citadel that began to inflict casualties, increasingly so when the Americans emerged from a cornfield into the clear view of other guns mounted in several positions: La Teneria; at the Purisima Bridge, three hundred yards west of La Teneria; and, three hundred yards southwest of La Teneria, two guns and two hundred men in a fortified position known as "El Diablo" that, notwithstanding the previous day's reconnaissance, had gone unobserved.

Garland attempted to enter the city on a road about two hundred yards west of La Teneria, which required his men to change direction under heavy fire. The regulars maintained their formations, but the Maryland Volunteers broke ranks to take what cover quarries and small ditches offered. The regulars continued their advance toward a road running south from the plain that would take them across a stream (the Arroyo Santa Lucia) and into the city. Some Mexican troops positioned themselves behind the stream in an attempt to block entry to the city, but while the Americans continued their advance another 150 Mexican troops with an 8-pounder gun entered La Teneria. These latter opened fire, together with hundreds of soldiers on flat rooftops and the guns in El Diablo, the Citadel, and three other positions nearby. Capt. William Henry recalled the scene thus: "From all its embrasures, from every house, from every yard, showers of balls were hurled upon us. Being in utter ignorance of our locality, we had to stand and take it; our men, covering themselves as well as they could, dealt death and destruction on every side; [but] there was no resisting the deadly, concealed fire, which appeared to come from every direction. On every side we were cut down."

Fired on from many directions and confronted by the roar of artillery and small arms as they negotiated narrow streets filled with thick smoke and strewn with their own dead and wounded, the Americans found themselves utterly disoriented. Under these trying circumstances, command and control over troops trained to deploy in linear formation on open ground became virtually impossible. "Upon entering the town," Lt. Gen. Henry Wilson later wrote, "the obstruction of stone walls, houses, water courses, and shrubbery intersecting the streets, precluded all possibility of maintaining the order of the respective lines." Still, and notwithstanding the hail of fire and clouds of smoke, some of Worth's men managed to cross the arroyo along a narrow bridge leading into

the city. Most of the 1st Infantry remained on the north side of the stream and traversed a limestone wall, beyond which they sheltered in a courtyard and reorganized. Two companies then proceeded east toward La Teneria, employing a log they found east of the bridge to traverse the watercourse before regrouping on a road running along the south side of the arroyo.

Several redoubts protected the approaches into the city in this area, with five batteries of guns reinforced by a sixth in the Citadel, all of which covered the road and canal. Still, two badly understrength companies totaling forty-two men under Capt. Electus Backus, of the 1st Infantry found an alternative approach to the three main entrances into the city that avoided both detection and fire from the batteries. Shortly thereafter, however, advancing east of La Teneria, this small force came under fire from a building, which they stormed and cleared. Significantly—for it became a prominent feature of the tactics employed by the Americans two days later—the men then proceeded to the roof of this particularly tall structure, from where they could observe all the fortified positions in northeast Monterrey, including El Diablo, then firing on the 3rd Infantry. Elsewhere across the city, the rooftops swarmed with Mexican soldiers. The party of Americans, under Backus, cleared the roof of a distillery thirty yards to the rear of La Teneria, but the bulk of Worth's men remained in the streets, attempting to approach the distillery under constant musket fire from houses lining their route and artillery from the fortified positions previously identified. Such intensive fire forced the Americans to abandon the idea of assaulting La Teneria with the few dozen men within close proximity of it.[1]

Meanwhile, farther west, the 3rd Infantry found itself under intense fire from troops on rooftops and inside houses. The Americans' training had not prepared them for street fighting, and the narrow cobblestone lanes precluded forming into line or firing volleys according to normal infantry drill. Accordingly, regimental cohesion broke up; small groups of soldiers sought to cross the arroyo and enter the city. Although these men managed to cross to the south side of the stream, losses began to mount, including their colonel—shot in the face and mortally wounded—and their adjutant, struck in the neck by a musket ball and killed outright. What remained of the regiment took cover from the withering fire down a side street, carrying as many of their dead and wounded as they could.[11]

Around this time, the men of the Baltimore Battalion, a volunteer unit led by Lt. Col. William Watson that had been concealed behind hedges and in ditches on the plain on the outskirts, rose to their feet and ran into the city to join the regulars, sustaining several casualties in the process. Watson, in the act of ordering an attack on La Teneria, had his horse shot from under him. Rising to his feet, he collected some men and advanced on the position, only to be fatally struck by a musket ball to the neck, upon which his men halted and found what shelter they could from the heavy fire. About this time, to support the infantry, Taylor ordered forward a battery of artillery, whose horse teams as briskly as possible pulled its four guns across a mile of the plain north of Monterrey. Four forts opened fire but failed to prevent the small battery

from entering the city, where Garland directed it to engage Mexican troops and a single cannon deployed in a street. In the event, once inside the city and unlimbered, the American gun crews found not only three of their four guns incapable of firing but themselves dangerously exposed to musket and artillery fire. Mounting losses in men and horses obliged the beleaguered crew to retire. However, the men could not limber up and maneuver. Instead, they had to manhandle the guns beyond the range of the enemy and limber up in narrow confines. When the battery left the city and retraced its original course across the plain, it had lost eighteen horses and many of its crew.[12]

Inside the city, the whole of the First Division, weakened by unexpectedly fierce resistance, withdrew, unable to reach the rear of La Teneria as hoped. Taylor, still at Walnut Springs and aware that the regulars in the city were under pressure and unable to capture La Teneria, ordered forward reinforcements for Garland: three regiments of volunteers and the 4th Infantry. From among these troops, Brig. Gen. John Quitman, who commanded the Second Brigade of the Third Division, was to select the 1st Mississippi and the 1st Tennessee Volunteers and with them assault La Teneria. Thus, by late morning, with the additional commitment of the 1st Ohio Volunteers, a full-scale assault on Monterrey from several directions and involving two thirds of Taylor's army had completely replaced the original plan of a diversion for Worth's attack on the western part of the city.

Meanwhile, on the plain, Maj. Gen. William Butler, commander of the First Volunteer Division of two thousand men, deployed his troops in a slight depression that offered protection from the guns in the Citadel. These troops were to assist the beleaguered regulars still engaged in the streets, unable to make progress toward La Teneria. While Butler's men prepared to advance on the city, the 4th Infantry, which had become separated from the First Division, began to advance toward La Teneria after emerging from a cornfield, only to be met with artillery fire from El Diablo, La Teneria, and the Citadel, as well as musketry. The heavy casualties inflicted obliged the men of the 4th, who had managed to come within thirty feet of La Teneria, to retire into a cornfield, having lost a crippling third of their number.[13]

At the same time, the 1st Mississippi, the 1st Tennessee, and the 1st Ohio formed up to advance across the plain. Artillery fire from the Citadel inflicted dozens of casualties on these units, which sustained further losses when the column came within range of La Teneria and El Diablo. The Tennesseans approached La Teneria to its front, as had the 4th Infantry before them, in direct line of fire of its guns. Artillery in El Diablo and a redoubt at the Purisima Bridge to the west also concentrated its fire on the Tennesseans, one of whom later described the assault in the flowery language of the era:

Two hundred yards brought the head of our column upon the open plain, and in a moment the "Black Fort," [yet another fortified position] shrouded in smoke, was [also] blazing like a volcano, and its angry missiles came whizzing and whirling about our ranks, tearing up the earth, ricocheted over our heads and rolled along

the plain. Quickening our already rapid pace, we dashed on through the thorny shrubs, while the new forts on our front and flank [La Teneria, El Diablo, and the redoubt at the Purisima Bridge] poured on our column a perfect hurricane of balls, that howled and hissed around in fearful dissonance. Shot after shot crashing through our ranks or enfilading our line, strewed its pathway with mangled bodies, shattered limbs, and headless trunks; but unheeding all, on we rushed over the dead and wounded, and with reckless impetuosity continued with unslackened speed toward the enemy.[1]

When within three hundred yards of La Teneria, the Tennessee and Mississippi volunteers changed formation from column to line, the former unit facing the front of this fortified position, the latter opposite its northwest side. Artillery and musket fire took a heavy toll on both, and the Tennesseans recoiled a short distance at one point, while Quitman and the adjutants of both regiments rode along the ranks seeking to steady the men and keep order. Finding it impossible to fire in volleys, the men loaded and fired independently as rapidly as possible, taking cover where they could as the roar of musket and artillery fire drowned out the shouts of their officers.[1]

When the Mississippians came within 180 yards of La Teneria, the rate of fire from the Mexicans suddenly slowed, for the regulars on the roof of the tall building had redirected their fire against the embrasures of the fort, imperiling the gunners. The time appeared right to take the place by storm. In the absence of any order to do so, Lt. Col. Alexander McClung led the Mississippi volunteers forward bearing their rifles and, having no bayonets—issued only to men carrying smoothbore muskets—a range of bladed weapons, including Bowie knives and in some cases swords. Animated by a desire to avenge their heavy losses on the approach march, the volunteers stormed the entrance to La Teneria while at about the same time the Tennesseans followed suit. One eyewitness later wrote that the men "raced up to the cannon's mouth like very devils, in the face of a shower of balls and grape shot." Jumping across a ditch facing the north face of the fort and climbing over the ramparts, the combined impetus of the two units drove the garrison out the rear of the fort toward El Diablo or the distillery, with American riflemen in pursuit, including McClung, until he fell badly wounded inside the courtyard.[1]

During the attack carried out by their southern comrades, the men of the 1st Ohio under Butler advanced along the plain and entered the city at a point farther west than Garland had chosen that morning. The defenders, behind barricades of masonry and other materials, opened fire with muskets and canister shot—the volunteers' baptism of fire. Butler possessed neither a map of the city nor a clear objective in mind, and his column soon came under fire on its flanks. At one point the troops took cover behind a hedge, and the suggestion emerged that they break into the houses. In the absence of entrenching and other tools—spades, pickaxes, and crowbars—needed to break through the thick adobe and limestone walls as well as the heavy wooden doors, this proved impossible. Returning fire also proved all but impossible given the concealment of

the defenders. One eyewitness recorded later that the unit "entered the suburbs of the city, only to find itself raked on all sides by batteries of whose location we were ignorant, and escopette [musket] balls from the tops of the houses, whose occupants were perfectly safe, as we could neither burn nor batter down their stout walls."[1] Butler, advised to withdraw by a fellow officer who had witnessed the carnage wrought on other units earlier that day, galloped over and conferred with Taylor, who agreed and allowed the Ohioans to withdraw.[1]

Over at La Teneria, however, the Americans were determined not to lose the initiative gained in seizing that stronghold. Col. Jefferson Davis, the future president of the Confederacy, gathered a group of twenty soldiers, crossed the Arroyo Santa Lucia, and advanced within a hundred yards of El Diablo, which he was determined to capture. A group of Mexicans stood behind a ten-foot wall to the position's front and began a firefight with the Mississippians. Mexican artillery on top of the hill, however, could not depress its guns sufficiently to do any harm to Davis' men, who took positions along an embarkment and awaited reinforcements. Emerging from cover brought a storm of musket fire from the fort and enfilading fire along the streets, obliging Davis' men to seek cover from the buildings close to El Diablo, a prospect they quickly found untenable: every approach was exposed to deadly fire. Just as Davis had collected a force of forty men and was preparing to assault the fort, Quitman ordered him to withdraw his troops from the city. Furious at being denied the opportunity to achieve his objective, Davis led his men back over the creek to a small house where, protected from fire, the men lay down, worn out from their exertions.[1]

Taylor, unaware that the volunteers had taken La Teneria, had ordered his troops out of the city after consulting with Colonel Garland. But as Davis was retreating, Taylor learned that La Teneria had fallen and that the regulars had possession of the distillery. Under these more propitious circumstances, Taylor ordered Butler to renew the assault on El Diablo, at the same time instructing Garland to assemble what remained of the 1st, 3rd, and 4th Infantry and the Baltimore Battalion to seize the same position. The fortunes of the day could still be turned, and the eastern part of the city secured. Again, all thought of a diversionary effort had been abandoned in favor of a general assault.[2]

Accordingly, the Ohio Volunteers entered the city for the second time at the point where Garland's men had been repulsed earlier that day. Evidence of that encounter lay everywhere to see, large numbers of dead and wounded strewn about the streets, in houses, and on rooftops. The Ohioans advanced, operating in small groups, firing from the cover of houses and other structures, making best use of what cover they could find. Proceeding southeast in the direction of El Diablo, they crossed the waist-deep water of the Arroyo Santa Lucia, all the while under fire. Having crossed the stream, the Ohioans came under particularly heavy fire from troops behind a wall; the Ohioans charged the position, from which the Mexicans fled, and employed it to fire on any soldiers who exposed their heads in El Diablo. The Mexican commander in the fort, perceiving the attempt to outflank his position, moved his two guns outside the walls to

widen their field of fire. At the same time, Ampudia was continually shifting his infantry across the rooftops in step with the progress of the Americans through the streets, since he did not have sufficient forces to defend all approaches into and within the city simultaneously.[21]

At the same time, in La Teneria, officers from different units sought to reorganize their troops, intermingled by the recent fighting and formed into improvised companies with which to support the Ohioans. With some effect, the new garrison of La Teneria turned one of the captured guns on El Diablo, but the Mexican battery at the Purisima Bridge down the lane and to the right of the Ohio Volunteers soon began to fire canister along their flank, bringing down many men. Davis, with his Mississippians, endeavored to assist the beleaguered Ohioans by neutralizing the battery, not through a coup de main but by musket fire down on the crew from the upper floors of a nearby building. Then, observing a road down which he thought it possible to attack the battery, Davis led his men forward, soon joined by elements of the 1st Infantry, who advanced down the street beside the Ohio Volunteers. Meanwhile, Butler's men proceeded down a different route and came within a hundred yards of El Diablo, demonstrating thereby that even volunteers with no previous combat experience could sometimes conduct themselves like regulars. Yet, while their courage did not fail them, fire from three sides exacted a heavy toll. Butler later noted in his report, "The men were falling fast under the converging fires of at least three distinct batteries, that continually swept the intervening space through which it was necessary to pass." Senior officers on the spot concluded that a single regiment could not hope to storm El Diablo successfully, and all the Ohioans and Mississippians were consequently ordered to withdraw.[22]

While the volunteers were making their way out, Garland and his officers had collected as many men as they could around La Teneria with a view to assaulting El Diablo from the rear. By noon, though, his forces having been in action for four hours, he could muster only half of his original strength and was short of officers. The men proceeded along the north side of the arroyo, Captain Henry, 3rd Infantry, recording that as soon as they left the cover of La Teneria, "we were exposed to a galling fire of musketry, escopets [sic], and artillery.… Every street was blockaded, and every house a fortification, and on all sides our gallant officers and men were shot down."[23] As before, Garland possessed no map nor, consequently, any knowledge of possible crossing points. Circumstances grew still more perilous when the troops encountered two guns at the Purisima Bridge, supported by infantry; the guns and infantry, at about a hundred yards' distance, together killed a number of Garland's officers and men. The remnants of the 3rd reorganized and advanced onto the narrow bridge, their close order making them an easy target. A battery of U.S. artillery rapidly moved from La Teneria to support the assault, but they were of light caliber and lacked the penetrative power required to inflict damage on guns protected by masonry barricades and infantry by sandbags and improvised parapets. Above all, Mexican infantry posted on the city's rooftops enjoyed virtual immunity to fire from street level. Unable to withstand such withering fire, the 3rd retreated to La Teneria, which

offered the only proper cover in the city from fire so intense that it forced the retreating soldiers to lie prone for an hour in a road before finally reaching safety.[2]

El Diablo remaining under Mexican control, the 1st Ohio and 1st Mississippi began to withdraw across the plain. They were attacked en route by Mexican light cavalrymen who, emerging from the Citadel, plunged their lances into wounded and stragglers before reaching the American main body. Some of the volunteers, exhausted, broke ranks and dispersed into a cornfield where an officer organized them along a nearby hedge of chaparral—a dense thicket of shrubs and bushes. As the lancers approached the main body, the Ohioans fired a volley that drove them off. Similarly, a second body of lancers never made contact with the Mississippians.[2]

As the day came to a close, the regulars and volunteers returned to Walnut Springs. Rain began to fall around 5 p.m., and, lacking tents, the men spent the night with neither cover nor food, the seizure of La Teneria their only tangible achievement. Taylor, concerned that the Mexicans would try to repossess this position during the night, had left the 3rd Infantry and two companies of the 1st Kentucky to protect it; the remaining Kentuckians camped outside with the rest. By the close of the evening, the diversion by Garland's First Division against eastern Monterrey in support of the Second Division had achieved only very limited success, all the more unpalatable given the prohibitive cost of the day's fighting.[2]

SIMULTANEOUS OPERATIONS FROM WEST AND EAST, SEPTEMBER 22–23

It will be recalled that on the 21st Worth's troops had captured the hill known as Federacion and its two fortified positions. Now, with a view to assaulting the Obispado on Independencia the following morning, he organized a force under Lt. Col. Thomas Childs, with 470 men. Childs' command comprised three companies of artillerymen serving as infantry, three companies of the 8th Infantry, and seven companies of Texas volunteers. In an effort to reach the base of Independencia undetected, Childs began moving across cornfields and chaparral at 3 a.m. on the 22nd. One group approaching from the southwest and the other from the northwest, they advanced through thorny bushes and around small rock formations, not coming under fire until within a hundred feet of the summit, on which stood Fort Libertad, a redoubt held by seventy Mexican infantry. A firefight duly commenced, followed by an assault launched by both bodies of American troops, at whose approach the Mexicans fled eastward toward the Obispado, taking their artillery with them. Too tired to pursue, most of the Americans remained in their newly captured position while a small party of soldiers approached to within 350 yards of the Obispado to assess its strength: a stout, two-story structure surrounded by breastworks and accessible only through a single, fortified door. Windows and loopholed walls enabled the garrison of two hundred men and three guns to fire on anyone foolish enough to attempt a frontal assault. Some of the palace's defenders were outside, behind

rocks and bushes.[2]

Bombarding this position into submission seemed more sensible than executing a coup de main but doing so required the Americans first to drag artillery up a seven-hundred-foot hill. Remarkably, with the aid of ropes, dozens of gunners and infantrymen dragged a 12-pounder howitzer up to the summit, where, once in position, it began to lob shells onto the Obispado. After inflicting some damage the Americans invited the garrison to surrender, which they refused to do. As a frontal assault posed no less a risk of heavy casualties and no more certainty of success than it had at the outset, Worth settled on a ruse. A small party of soldiers would approach the palace entrance, seeking to trigger a sortie from within. If it came, American regulars hiding amid the rocks and bushes on the side of the hill would suddenly appear, disperse the sortie, rush the opened entrance, and engage the troops inside. The plan adopted, ninety Louisianans deployed about fifty yards outside the Obispado and opened a harassing fire. In time part of the garrison emerged, cavalry that Ampudia had earlier sent to reinforce the Obispado, with infantry behind. The Louisianans duly fell back to a rocky outcrop. The regulars soon emerged, established a line, and opened fire on the Mexicans. Surprised by the sudden appearance of a sizeable force of infantry, the cavalry galloped off into the city, and the Americans made for the entrance to the Obispado, its door now pierced by an aperture created by one of the howitzer shells and large enough to admit a man. Perceiving their position now to be untenable, the Mexicans abandoned it and fled into the city. The Americans, at a cost of six killed and seventeen wounded, were left in possession of this dominating feature, together with thirty prisoners, a howitzer, two 9-pounder guns, an 18-pounder, small arms, and a large stockpile of ammunition.[2]

The capture of Independencia and the Obispado on September 22—on which day the eastern part of the city remained quiet, as Taylor consolidated his hold on La Teneria—cut off not only Ampudia's line of retreat to the town of Saltillo to the west but also the main road leading to Mexico City, about 560 miles to the south. Nevertheless, and notwithstanding the loss of the western portion of Monterrey, the Mexican commander, far from contemplating retreat or surrender, was more than prepared to contest possession of the remainder of the city, which the Americans were equally determined to occupy. Accordingly, on the morning of the 23rd, Worth ordered some infantry and a battery of guns to block the Rinconada Pass to prevent reinforcements from approaching and decided, in the absence of further orders from Taylor—and unaware of what that general contemplated doing to the east—to push on into the western part of the city. Orders were duly issued for the 5th and 7th Infantry to move off Federacion and Independencia and for a small force to reconnoiter to establish what resistance the Mexicans might offer. From these scouts Worth learned that the Mexicans had abandoned the extreme western part of the city and concentrated closer to its center, beyond the range of the American guns on Independencia. Then, at about 10 a.m., Worth heard artillery and small-arms fire in the eastern part of the city—evidence that Taylor had ordered an attack

there. Worth's unauthorized assault from the west could now, he reckoned, squeeze Ampudia's forces between the two American thrusts.[2]

Worth formed two columns. One to the south, poised for an advance near the Santa Catarina River, consisted of four companies of the 7th Infantry and a 12-pounder howitzer, later to be reinforced by light guns. The northern column comprised four companies of the 8th Infantry and two 6-pounders. Each column also contained 150 Texas Volunteers, many of whom had gained experience fighting Mexican troops in December 1842 in the small border town of Mier. These veterans of the house-to-house fighting that had occurred there had learned not to expose themselves in the open streets but instead to breach walls between buildings and houses and move through them—quite in contrast to the methods, already described, employed by Taylor's men on the first day of the fighting in Monterrey on September 21.[3] Worth now decided to adopt these tactics, an idea that may have originated with his Texan aide-de-camp, Maj. Edward Burleson, who had fought the Mexicans at San Antonio de Bexar in 1835 during the War of Texan Independence. In that small but instructive engagement, Texan volunteers had learned to dig trenches across streets to protect themselves from artillery fire, to break through adobe walls into adjoining houses, climb onto rooftops, and break through ceilings. Whether Burleson actually proposed such methods to Worth remains uncertain, but it is worthy of note that the general now dispatched engineers to assist the Texans in cutting holes in the sides of houses using pickaxes and crowbars—many acquired from Soldado after its capture—and to improvise ladders to place against walls to reach rooftops.[31]

In the midafternoon the two columns advanced through the city as far as the Plaza del Carne, where they found hundreds of Mexican troops covering the rooftops and standing ready in loopholed buildings and behind sandbags. A masonry barricade protected a solitary cannon commanding a street leading beyond to the center of the city. Worth, who had left the Obispado with the 5th Infantry and some light artillery, reinforced the southern column with two companies of the 5th and the northern column with five companies, three from the 7th Infantry. The men were directed to cut through the walls of houses and other buildings and to wrest control of the rooftops. Yet before the assault began late that afternoon Mexican reinforcements arrived from the eastern side of Monterrey, bolstering the defenses of the city center and the rooftops.[32]

In a positive development for Taylor, however, earlier that morning the troops in La Teneria had discovered that the Mexicans had evacuated El Diablo during the night, dispelling concern that Ampudia would use Diablo as a springboard for retaking Teneria. Quitman's 1st Mississippi and 1st Tennessee Volunteers occupied the abandoned fort, receiving fire as they did so from a small nearby redoubt. With El Diablo secured, Taylor ordered Quitman to advance farther west into the heart of the city. Three companies of Mississippians and one company of Tennesseans advanced toward the redoubt that had fired on them, whose occupants, supported by men perched on rooftops all around, offered

stout resistance. Quitman requested assistance from the East Texas Rangers, who galloped from west of the city, dismounted, and joined Davis' Mississippians. Facing withering fire, the Americans forced their way into houses, smashed holes in the walls, and climbed to the rooftops. Davis recalled how "we continued to advance and drive the enemy, by passing through courts, gardens, and houses, taking every favorable position to fire from the house tops, which from their style of architecture furnishes a good defence against Musketry."[33]

Wielding crowbars, pickaxes, shovels, and other tools, the Texans and Mississippians, exposed in the streets but protected by covering fire from other soldiers, smashed holes in exterior walls and broke down doors. An opening once made, other men would cross the street, enter the structure, and proceed to the rooftops, from which dominating positions they expertly employed their rifles to dislodge opposing troops both atop adjoining and more distant roofs and also behind barricades in the streets below, now conspicuously vulnerable to accurate fire from above. It happened that Davis' Mississippians possessed the best rifle of its day, featuring the percussion cap instead of the inferior flintlock firing mechanism, but because the rifle could not be fitted with a bayonet his men carried knives, swords, and revolvers for fighting at close quarters. The smoothbore muskets of the American regulars, also carried by the Mexicans, were poorly suited to this form of fighting. As designed, they were very effective fired in volleys at close range against serried ranks in the field. They had now proved effective as well against soldiers crowded together in narrow streets, as evidenced by the losses sustained on the 21st. Against individual men crouching or lying prone on rooftops or behind parapets, however, the musket seldom hit its mark beyond fifty yards, whereas the rifle in experienced hands could easily strike an individual at four times that distance. Armed with weapons appropriate for the task and highly proficient in their use, the Texans, Mississippians, and Tennesseans gradually cleared the surrounding rooftops of Mexican troops before killing or driving out those manning the redoubt below. Thus, by this simple adaptation of tactics the Americans had found a method of operating in an urban environment far superior to conducting an orthodox assault at street level.[3]

At some point in the evening the Americans brought forward a battery of artillery to clear the streets and support the 3rd Infantry, which had sustained losses two days before, on the 21st. The crew unlimbered the guns in an open street and commenced firing, but intense musket fire began to take a toll on men and horses. The gunners in response tied ropes to their guns and pulled them into cover to load, then hauled them back out into the street to fire each round. Meanwhile, after every discharge of the guns, the regulars, Texans, and Mississippians rushed forward, screened by the clouds of smoke billowing up in the narrow streets, to force a door or smash through the side of a house. Canister shot temporarily forced the Mexicans to take cover, providing the Americans time to cross streets less perilously and advance deeper into the city. Nevertheless, Taylor ordered the artillery to withdraw, finding that light artillery was largely ineffective against troops protected by limestone walls, not to mention

formidable barricades. All the while, Taylor personally joined the action in the street, exposing himself to fire before gaining entrance to buildings. This exemplary style of leadership, like that displayed by so many other officers during the fighting in Monterrey, buoyed the men's morale.[3]

Meanwhile, the regulars of the 3rd Infantry made progress toward the Grand Plaza, breaking through the doors and walls of houses along the route, to within a short distance of the cathedral—the site of Ampudia's headquarters and consequently a key objective. Civilians fearing for their lives congregated in the plaza as American troops approached. About this time Davis requested artillery support for his Mississippians, who found themselves unable to make further headway under the incessant fire. Taylor not only declined but, notwithstanding his troops' considerable progress, ordered them all out of the eastern portion of the city. Davis, who had nearly reached his objective, was aggravated and perplexed but complied. The Texans, equally angry and dumfounded, followed suit.[3]

It had been increasingly clear to the defenders that they could neither halt the advance in the east nor concentrate for the defense of the west. Now, however, the subdued sound of fighting in the eastern part of the city seemed to give Mexicans to the west renewed hope that the tide of battle was turning: Worth's men watched as hundreds of opposing troops assumed positions on rooftops near the Plaza del Carne. Fire poured down on the Americans, but they had learned, particularly from the Texans among them, the lessons of Mier and San Antonio de Bexar, to make use of the houses around them. For instance, occupying corner buildings enabled them to fire in numerous directions and dominate multiple thoroughfares; taller buildings, moreover, provided the best commanding positions in terms of observation and fire. That in turn enabled troops to clear surrounding buildings, by occupying their roofs by ladders, breaking through into the rooms below, and gradually working their way down to street level.[3]

As before, the engineers were particularly useful. "In crossing a street that was raked by the enemy's cannon and infantry on housetops and houses," a Texan later recorded, "a few men would rush across with crow bars and picks, burst into the doors, while others kept up a heavy fire from behind the parapets on the house tops." One soldier found that with a pickaxe he could penetrate a two-foot clay wall in twenty minutes.[3] Employing these tactics, the Texans made gradual progress, as Reid later wrote: "Doors were forced open, walls were battered down, entrances made through longitudinal walls, and the enemy driven from room to room, and from house to house, followed by the shrieks of women, and the sharp cracks of Texian [sic] rifles. Cheer after cheer was heard in proud and exulting defiance, as the Texians or regulars gained the house-tops by means of ladders, while they poured in a rain of bullets on the enemy on the opposite houses. It was indeed a most strange and novel scene of warfare."[3]

Another Texan volunteer recalled how ready the Mexican defenders were for their intruders: "When we broke through the wall, we received a heavy volley from the room right in our faces that broke the wall above us and knocked

off one hat. We fired into the room, then piled into it, and the Mexicans left in a hurry." In such close confines, the fighting often involved combat with knives, bayonets, rifle butts, or anything else that came to hand. The Americans regularly encountered civilians but appear to have done them no deliberate harm. Many of the Texans on the flat roofs of the city were Rangers with experience of living out in the wild for weeks at a time, fighting Comanches and other indigenous warriors. They proved invaluable not merely as crack shots but also as frontiersmen who understood the necessity of expending their limited ammunition only after positively acquiring a target. Light artillery played some part in the fighting in the western section of Monterrey, but as farther east, it was of limited use.

As for silencing Mexican artillery, the Texans had learned a decade before to approach a battery by burrowing through adjoining walls of houses and creating loopholes a short distance from the gunners before picking them off. Other riflemen meanwhile directed their fire from rooftops, with equally deadly results. Such tactics contributed to the Americans' progress, but as the distance to the cathedral narrowed resistance grew correspondingly more intense; many of the 7th Infantry were shot trying to climb ladders or batter their way into houses. [1] Capt. Napoleon Dana recalled that "we had nothing to do but fight them their own way. The enemy fought very obstinately, and we had to fight them by inches and advance upon them house by house." [2] Meanwhile, soldiers of the 5th and 8th Infantry seized a tall building on the southeast side of the Plaza del Carne by gradually smashing their way through all the adjoining houses and buildings, thus surrounding the position and obliging the occupants to abandon it. By these means, Taylor's men made incremental progress, eventually converging from two sides. Ampudia's decision not to attempt the recapture of La Teneria and El Diablo now revealed itself as a grave tactical error, for declining to counterattack and stem the American tide had allowed his forces to be hemmed in progressively by a pincer movement. Still, he was to have some respite, for darkness on the 23rd brought an end to the fighting, allowing both sides to tend to their wounded and feed their men and horses. All around lay the detritus of three days' intense fighting: hundreds of bodies, dead horses, weapons and accoutrements strewn about, the ghastly scene punctuated by the physical devastation wrought on houses and buildings. [3]

On the morning of the 24th, Mexicans came forward bearing a white flag. In the negotiations that ensued, Taylor, conscious that he was deep in enemy territory with a small force that had suffered significant losses, generously allowed Ampudia to withdraw from the city within seven days—in possession of their arms and ammunition, plus much of their artillery—to a mutually agreed point near the Rinconada Pass. A general cease-fire would also come into force, to last for eight weeks. Taylor, later berated by President Polk for the lenient terms he had granted to the Mexicans, reported as justification his losses of 136 officers and men killed and 368 wounded. Ampudia claimed losses of 122 killed and 316 wounded.

LESSONS IDENTIFIED

Several lessons emerge from the battle for Monterrey, as relevant today as they applied in the mid-nineteenth century, confirmation that while the character of war changes, its nature remains constant.

First, if a city can be surrounded and neutralized while strategic-level operations continue unimpeded elsewhere, the attacker need not engage in a possibly costly and protracted urban fight. In the case of Monterrey, however, instructions from Washington specifically required Taylor to seize the town, for leaving a sizeable enemy garrison in his rear as he advanced into the heart of Mexico would leave him and his tenuous lines of communication back across the Rio Grande extremely vulnerable.

Second, the defender must establish strongpoints that are mutually supporting, failing which attacking forces may isolate and seize them in turn—unless of course the defender has sufficient troops either to hold the area between them or to bring up reinforcements as circumstances demand. While Mexican forces at Monterrey put up a determined resistance across the city, converting houses and other buildings into formidable strongpoints and offering from each respectable resistance, they failed to establish defensive positions that could support one another with overlapping fields of fire. The fall of a fortified position did not trigger what is today known as "final protective fire," whereby a defender on the point of being overwhelmed by an attacker may rely on fire being laid down in considerable concentration by external small arms, artillery, and often other weapons. In too many instances at Monterrey, no such support was available to defenders holed up in isolated, if strong, positions. Also, no reserves were available to launch counterattacks—that is, when key fortified positions are lost, they must be retaken lest the initiative and momentum pass to the opponent. Ampudia, by spreading his troops too thinly across the city and failing to repossess captured key terrain, effectively enabled Taylor to execute a successful double envelopment. Frederick the Great's adage that "he who tries to defend everything defends nothing" seems apt in connection with the defense of Monterrey.

Third, it was sensible of the Americans, after sustaining heavy casualties in futile and costly street fighting, to alter their tactics. They drew on their Texans' recent experience of fighting against Mexicans in urban environments to create "mouse holes," burrowed through the walls of adjoining buildings. It was a tactic employed by the French during their assaults on the Spanish city of Saragossa in 1808–1809 but of which the Americans were almost certainly unaware. Lessons of war, it seems, must be continually relearned, and ignorance thereof imposes a considerable cost. Much may be gleaned from the warfare of an earlier age, notwithstanding the advent of airpower and digitization. The continuing efficacy of such tactics as mouse-holing, for instance, has been shown by NATO forces in Afghan compounds and by Israeli forces in Gaza.

Fourth, the value of controlling an elevated position has stood as a key element

of military doctrine since time immemorial and did so in Monterrey. There, by mounting the city's rooftops, American troops acquired, in the first instance, cover from fire from below; in the second, elevated positions from which to clear enemy troops impeding the advance of infantry at ground level; and in the third, positions from which to drive off sharpshooters on other rooftops, thus depriving the enemy of the same advantage. Subsequent operations, urban and nonurban, have not been exceptions: Spion Kop (1900) during the Boer War, Vimy Ridge (1917) in the First World War, Monte Cassino (1944) in the Second World War, Dien Bien Phu (1954) during the Indochina War, Hamburger Hill (1969) during the Vietnam War, the rocky outcrops of the Falklands in 1982, and in more recent times the taller structures in Grozny, Fallujah, Ramadi, and Raqqa, to name but a few notable examples. No natural high ground dominated Monterrey, as did the heights above Kabul whose occupation forced Maj. Gen. William Elphinstone to abandon that city in January 1842, with disastrous consequences. Nevertheless, at Monterrey the Americans appreciated that clearing and occupying the rooftops would provide a significant advantage in terms of observation and fields of fire than as against the narrow streets of the city. In a clear recognition of the value of the conceptual component of fighting power, the attacker learned to adapt as circumstances required, denying the enemy one of the prime features benefiting a defender.

Fifth, and finally, whether in attack or defense, troops must be armed and equipped for the specific task in hand. The superior accuracy of the rifle served the Americans extremely well when clearing rooftops and then sniping from them, whereas the bayonet-fitted musket suited them in the very different scenario of the assault. Artillery played a critical part in success, clearing the streets of enemy positions and troops and blasting holes through walls. Similarly, the attackers possessed the requisite tools and ladders for breaking through walls and scaling buildings, failing which defeat appeared a virtual certainty. Technological advances since the mid-nineteenth century notwithstanding, the same principle applies equally today; while modern small arms self-evidently provide greater range, accuracy, and firepower than those employed at Monterrey, success in any future context will continue to depend on the extent to which troops are armed with suitable weapons and trained in their use.

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LEE WINDSOR and JAYSON GEROUX

2

URBAN ANCHOR ON THE GUSTAV LINE

Ortona, December 1943

IN DECEMBER 1943 the German 76th Panzer Corps chose Ortona, a small port town on Italy's Adriatic coast, as the next main battle position in the infamous Gustav Line.[1] The decision condemned Ortona's citizens, the German troops sent there to make it a fortress, and the Canadian soldiers ordered to capture it to a murderous nightmare. The struggle for Ortona's multistory row houses, built with thick stone and masonry walls atop deep basements, became the Canadian Army's most famous urban battle. The tactics employed there became codified and embedded in its identity and practice. A 2006 doctrine supplement states, "The legacy of these operations [at Ortona] was a doctrinal solution to urban offensive combat: isolate the urban area, seize a foothold, and expand that foothold block by block until occupying the entire area and destroying the enemy."[2] "Mouse-holing" tactics, blowing openings through rowhouse walls to avoid exposed streets, became an iconic symbol of the Ortona legend.[3] However, as the Canadian Army deployed to southern Afghanistan in 2006, conventional Western forces engaging unconventional opponents in urban spaces like Fallujah once again appeared pertinent. Doctrine writers cautioned that at Ortona, "emphasis on the use of firepower kept friendly casualties to a minimum. Unfortunately, when the enemy stoutly defended the urban area, the emphasis on firepower resulted in the city's virtual destruction and high casualties amongst non-combatants." Protracted urban actions in the Ukraine in 2022–23 remind us that understanding the example of Ortona's complexity has enduring value.

BATTLE OF ORTONA

Map redrawn from Ian Gooderson, "Assimilating Urban Battle Experience: The Canadians at Ortona," Canadian Military Journal 8, no. 4 (Autumn 2007): 65

The conclusions here emerge from observations by field commanders, planning staff, and junior leaders in brigade, battalion, company, squadron, and battery command posts. The Canadian attacking force faced an enemy of comparable size, weaponry, and determination who employed Ortona's urban space as an anchor point for a main defensive zone. No two days in Ortona were alike: each side reacted to the other's moves, shifting weather, and the adjacent clash (related to the envelopment maneuver of which Ortona was a part) along a five-kilometer battlefront extending to the equally embattled village of Villa Grande. The mouse-holing tactics of 2 Canadian Brigade and other infantry and engineer methods for clearing enemy-held buildings formed one part of its tactical solution to the urban problem. Infantry company combat teams also included tank, antitank gun, mortar, engineer, and artillery detachments, who adapted fire and movement principles to Ortona's urban landscape. They won early control of the tallest buildings for the best observation, a tactic that came intuitively to the Canadian veterans of six months' experience fighting through mountains and hilltop towns in Sicily and southern Italy.

Maj. Ted Griffith later described how his tank troop fit in the equation. "We would put an armour piercing shot through the cement foundation of a building and sort of shatter the cement. Then we would put high explosives through the walls, on a delayed action [fuze] so that they would burst inside and blow the buildings out and the people with it too." Canadian tank crews, sappers, antitank gunners, and mortarmen methodically demolished buildings holding German strongpoints, "layering" direct and indirect fire at all ranges. German parachute engineer Carl Bayerlein would later complain that his company painstakingly prepared defenses and an elaborate kill zone in Ortona, yet the Canadians "recognized our trap and avoided it." He continued, "Whenever they came upon a nest of resistance, they slewed their turrets and took it under concentrated fire with high explosive or armour piercing rounds, until the house collapsed. Meanwhile the enemy batteries were firing without a pause."

An effective, if imperfect, Canadian brigade and divisional command, control, communications, and intelligence system managed the closequarter violence in and beside Ortona. The division included a wellpracticed, innovative service and logistics team that satisfied insatiable demands for every kind of munition from .45-caliber submachine-gun rounds to engineer demolition charges and armor-piercing 17-pounder antitank gun shells, along with warm food, fuel, and water in a narrow urban salient.[1] That command and logistics system coordinated 2 Canadian Infantry Brigade Group's efforts inside Ortona within an ongoing Eighth British (Commonwealth) Army offensive. Grim battles in rooms formed a harrowing but coherent set of actions within an all-arms brigade group operation in Ortona that in turn formed part of a larger 8th Indian Infantry and 1st Canadian Infantry Division corps-sized (i.e., multidivisional) assault on the

German 1st Parachute Division, defending the eastern end of a deep zone of defense known as the Gustav Line. When it finally quit Ortona and Villa Grande, 1st Parachute Division had been defeated and its positions penetrated everywhere along its five-kilometer front, threatening German units inside Ortona with encirclement.[11]

ORTONA'S PLACE IN WORLD WAR II HISTORY

Ortona's historical significance lies in the street battle between 2 Canadian Infantry Brigade Group and German paratroopers. Canadian Broadcasting Corporation (CBC) frontline radio news reports by reporters Matthew Halton and Peter Stursburg made it famous. Their voices aired across Canada in December 1943, punctuated by shell bursts and machine-gun fire, making Ortona synonymous with house-to-house fighting in what Halton labeled "the courtyard of hell." The story became legend in Canada and in the Commonwealth.[12] Fred Majdalany, MC (i.e., holder of the Military Cross), a veteran of the Italian campaign, journalist, novelist, and renowned historian, wrote, "It took them a week, and they spent Christmas Day doing it, and in the end they took it.… After Ortona the Canadians became the acknowledged experts in street-fighting. For the rest of the war officers who had been at Ortona toured the Allied military schools lecturing on the subject. Ortona is a small piece of Canadian history."[13]

Italian-campaign histories emphasize veterans' impressions that command and control mattered little during the eight-day struggle, often summed up as separate platoon and section-level engagements waged inside buildings and rooms. Reginald Roy, a Canadian veteran turned prolific historian, wrote how "Ortona was primarily a private or NCO's [noncommissioned officer's] battle, for when a building was being cleared either from the top down or the bottom up, it was done by small groups of men in such a way that an officer could not keep close control. Each group had its own story, and the innovations used to advance were frequently thought up on the spot."[1]

That perspective on urban warfare in Ortona came from Canadian Army Directorate of Military Training (DMT) officers who determined that "full direct control of the fighting was impossible at any higher level other than the infantry section." Their lessons-learned report emphasized the primacy of infantry, relying on grenades to win the battle from building to building and room to room.… "[U]nlike their opponents, the Canadians lacked experience of, and possessed very little training for," urban operations and that in the end the job at Ortona "fell mainly to the infantry."[1] The DMT report, however, undervalued and devoted less space to unit or formation perspectives or to the Canadian combined-arms process employed against the German defense inside Ortona.

Historically, events at Ortona were muddied also by the oft-cited Official History of the Canadian Army in the Second World War. The Germans of the 1st Parachute Division understood the actions at Villa Grande, Ortona, and on the flat spur between them as one defensive battle.[1] The Canadian Official History separated those events sequentially, and most subsequent English-language his-

tories followed its lead.[1] Thus in the literature 2 Brigade's urban action from December 20 to 28 and on to New Year's Day comes first, before the clocks turn back one week to review 1 Brigade's battle for the spur and the villages to the west. This format historically severs mutually dependent decisions, actions, and consequences.[1]

The Canadian Official History also claimed that "it was not considered the Germans would make a serious stand in Ortona."[1] This is based on an Eighth Army intelligence estimate that after yielding the Moro River line and the Saraceni Gully by December 19, the enemy was "likely to fall back under pressure in the Northern Sector, abandoning Ortona, and making his next stand on the Arielli River," three miles north.[2] These sentences left an enduring impression that Ortona was a German rearguard action to deny the Canadians the coastal highway and the town's shelter. Some accounts thus interpret Ortona as a test of how quickly the Canadians could drive off the small but skillful enemy rear guard and as having ended only when German paratroopers chose to abandon it. The Toronto Globe and Mail reported on the seventyfifth anniversary that "the Germans didn't consider Ortona a defeat. There was no mass surrender. The paratroopers vanished like ghosts three days after Christmas, leaving the utterly destroyed city to the Canadians."[21]

ORTONA'S PLACE IN GERMAN STRATEGY

In the event, the German force dispatched to Ortona was no mere rear guard. From December 20 to 27, 1943, Ortona formed the largest in a triangle of communities occupied and fortified by 1st Parachute Division, along with the village of Villa Grande five kilometers inland and the small rural hamlets of San Tommaso and San Nicola in the rear depth, commanding the wide, flat spur of farmland between Ortona and Villa Grande. These old stone communities crown the rear crest and flat spurs at the north end of the long, broad Ortona–Orsogna ridgeline. They blocked the two best roads leading north to the provincial capital of Chieti and the adjacent port city of Pescara, which marks the end of the ancient Roman Via Tiburtina-Valeria and Italy's Highway 5, which snakes through the highest Apennine peaks to Rome. Senior German commanders chose to occupy that space for "a decisive phase of the war in Italy … to secure central Italy which was of great importance both militarily and politically."[22]

Along the Gustav Line, in front of the Pescara River on the Adriatic side, and on the approaches to Cassino on the Tyrrhenian side Gen. Heinrich Vietinghoff-Scheel, Tenth Army commander, instructed German forces "that they must all be resolutely determined to fight hard to the last man."[23] Units of 76th Panzer Corps complied and fought to blunt Eighth Army's advance toward Pescara from 25 November to 20 December. In four weeks, the German 65th Infantry, 26th Panzer, and 90th Panzer Grenadier Divisions held their ground, counterattacked, and spent heavily in blood and equipment in an aggressive defense. By mid-December the comparatively fresh and full-strength 1st Parachute Division, along with Tenth Army artillery and rocket units, arrived to reinforce the now-buckling Adriatic wing of the Gustav Line in the most vulnerable sector, around

Ortona.[2] The Parachute Division anchored its defense zone on the plateau-like Ortona promontory and the commanding ground adjacent to Villa Grande.[2]

The paratroopers turned the Ortona–Villa Grande triangle into a castle bastion at the end of a long, commanding ridgeline descending from the equally well-fortified foothill bastion towns of Orsogna and Guardiagrele at the base of the Monte Maiella massif. The snow-capped Maiella towered 2,795 meters into the sky over the Gustav Line's Adriatic wing, forming an unassailable barrier that enabled German troops and heavy weapons to concentrate along a twenty-kilometer front from the mountains to the sea. On the other, southwest side of that Apennine mountain wall, Tenth Army assembled even more fighting power in the Cassino area for an equally formidable stand, opening thereby a new phase of the European theater of the Second World War.[2]

The 1939–43 war of movement now gave way to a bitter phase in which Germany and her allies dug in to retain Fortress Europe. This deliberate defense incorporated Old-World habitations of Western Europe; commanding heights in Italy were studded with communities hundreds if not thousands of years old, built on high ground controlling segments of an ancient road system. Thick stone-walled buildings offered readymade strongpoints and bombproof basements. That Ortona was perched on a high promontory controlling vital highways made it a logical place for the Germans to fight from in this new defensive phase of the war.

Commanders and staff of 1st Canadian Division knew about the Germans' reinforcements and deliberate defensive posture in Italy in December 1943. They were briefed that "the problem now facing us in Italy is delicate and complex, for the objective must be to allocate sufficient force to hold down these twenty-odd German divisions [in Italy]."[2] The Allied solution was to attack relentlessly and "wear down" new German units on the Gustav Line, keeping them busy and away from more vital fronts in the east and west.[2] Thus, the urban battle for Ortona marked the end of the physically demanding six-month steady advance through Sicily and southern Italy and the opening of a new grinding campaign of position and attrition. In this context German and Canadian orders respectively to defend and attack in the narrow streets and across ancient squares make gruesome sense. In effect, the Canadians advanced on Ortona not solely to win a small port town on the way to outflank Rome, although they certainly did have plans to employ Ortona as a forward base area. Instead, they attacked to fix and degrade 1st Parachute Division units positioned in and around Ortona as part of a long game.

DELIBERATE ATTACK AT ORTONA, DECEMBER 20

This chapter reconnects the sequence of choices and their battlefield impacts in and around Ortona, starting with December 20, 1943, as 1st Canadian Division prepared for a hard fight to reach Ortona. Two weeks of combat against a tenacious German defense of every farm building, road bend, and ditch in front of Ortona had put them on guard, inclining them to shell German posi-

tions heavily before advancing against them with tired men. The 1st Canadian Division commander, Maj. Gen. Chris Vokes, and his senior gunner (artillery commander), Brig. Gen. Bruce Matthews, planned to attack Ortona by continuing the firepower-heavy assault that from December 18 to 19 had blasted a foothold on the Ortona–Orsogna castle wall along the infamous section from Casa Berardi to "Cider Crossroads" (the Canadian code name by which it is still locally known). On December 20, Fire Plan Peony followed the Morning Glory and Orange Blossom artillery barrages, better known to history, of the previous two days. Peony would creep linear curtains of shell bursts to support Brig. Gen. Bertram Hoffmeister's 2 Canadian Brigade Group first across the three-thousand-yard exposed approach road to Ortona and then across the mouth of the Fosso Saraceni, known to Canadians as "The Gully," to Ortona's southern edge. Second Brigade would "then exploit to clear the town of enemy." This was no pursuit of a retiring enemy rear guard; the fire plan employed three Canadian divisional field artillery regiments, plus three more "British" field regiments, including 166th (Newfoundland), three British medium (i.e., smaller than field guns) Royal Artillery regiments from 1st Army Group, and a heavy antiaircraft troop firing counterbattery air bursts.[2] Nearly two hundred guns registered targets for the barrage, revealing that the Canadians expected the toughest part of the job to be crossing the open kill zone to the comparative safety of Ortona's southern heights and outskirts.

For readers outside the Commonwealth: Canadian ground force structure mirrors that of the British Army, in which units within infantry brigades are called "regiments" but in fact are overseas battalions of Canadian-based regular and Non-Permanent Active Militia (NPAM) regiments. Infantry companies and platoon structures are comparable to British practice. Canadian armored and artillery "regiments" consist of three squadrons or batteries equivalent to German or American battalions and companies. Canadian armored and artillery "troops" equate to American platoons.

In a preliminary security move, Brigadier Hoffmeister ordered Princess Patricia's Canadian Light Infantry and a Three Rivers Regiment (12th Canadian Armoured Regiment) tank squadron to seize the Ciampino heights. The Germans had doggedly fought to keep those heights, which controlled The Gully mouth and Ortona's southern approaches, for over a week. That morning the "Patricias" secured control, at last enabling Canadian engineers to bridge the Fosso Saraceni, thus opening a sheltered divisional crossing and staging area for armor and towed support weapons and enabling the rest of 2 Brigade's "tail" to assemble. Hoffmeister set up a forward "Command Recce" observation post on a headland overlooking The Gully's mouth and Ortona's south end from which he would be able to see and coordinate the two wings of his assault. Hoffmeister's Brigade Major, Maj. William "Clem" Dick, headed up the operations staff on the telephone and radio networks at the main brigade headquarters a little over a mile back.[3]

By noon attacking units were in place, and two hundred guns began to thunder.

In the center, the Patricias used the barrage to push a company down on the northern nose of the Ciampino heights the better to control the Saraceni Gully mouth and cover both wings of 2 Brigade's main assault opening on their left and right. On the inland left, Lt.-Col. Jim Jefferson's Loyal Edmonton Regiment formed the main effort, with tanks and crews from C Squadron, Three Rivers Regiment. These tanks emerged together out of The Gully's protection at Cider Crossroads, advancing north toward Ortona behind a creeping barrage. Edmonton rifle companies attacked up both sides of the main Orsogna–Ortona road, each with a troop of Sherman tanks and shielded to their front and inland left flank by the creeping rain of shells. The barrage worked much as intended, but problems with inaccurate maps, overworked gun barrels, and atmospheric issues resulted as the attack commenced in "short rounds" falling among Edmonton riflemen, a circumstance reported by the gunners as "strictly non-bono," or "no good" in their flawed Italian.[31] That friendly fire fell intensely enough to stop one frustrated "Loyal Eddie"–Three Rivers combat team for an hour, but overall the blast curtains achieved the day's mission "to attack and capture an objective astride the main approaches to Ortona."[32] By 3 p.m., the "Loyal Eddies" had reached the south end and the "shelter" of the first buildings on the town's outskirts.[33]

On the seaward side, the Seaforth Highlanders launched a supporting thrust by slipping a company and a tank troop down the coastal highway that descended into and across the mouth of The Gully, covered by the Patricia firebase on the Ciampino heights. The company descended with the tanks, picked through minefields, fought across the Saraceni stream, and secured a base at the bottom of the bluff by 2 p.m. The narrow Gully mouth gave the tanks the range to shoot up German machinegun positions covering the bluff beneath the Ortona promontory. A second Seaforth company scaled the steep southeast promontory face. Bold, cliff-scaling infiltration under tank covering fire had become a common Canadian tactic since Sicily. The Germans sharply contested the attempt with counterattacks, followed by grenades flung "over the cliff onto the forward platoons," which dug in on the cliff some three hundred yards below the top near the soon-to-be-famous Parrochio (parish church) Santa Maria di Costantinopoli.[3] Thus the Seaforths won a second Canadian toehold on the Ortona promontory, dividing German attention between two threats. The divisional headquarters war diary records that "at the close of the day's fighting, we were in the outskirts of Ortona, much to the relief of everyone concerned."[3]

Relief at reaching Ortona was tempered by growing awareness that the Germans were not flustered and remained determined to continue fighting from the cover of buildings in Ortona's southern end. Violence intensified in the last hours of winter daylight as the lead Edmonton platoons probed to these buildings. German prepared defenses included extensive mining and a large explosive trap powerful enough to blow a Three Rivers troop leader's tank high into the air, killing Lt. T. E. Melvin and all four crewmen.[3] To the west, 1 Brigade patrols and observation posts discovered substantial minefields and heard the sound of German troops digging in, indicating their intent to stand firm on an extended

front.[3] Prisoner identifications revealed that Ortona was held by 2nd Battalion 3 Parachute Regiment, backed by 90th Panzer Grenadier Division artillery and engineers and extra artillery troops. Other units were believed to be nearby. Nonetheless, by day's end, 2 Canadian Brigade's bridgehead over The Gully was guaranteed by the arrival of divisional heavy support weapons, including medium machine guns, mortars, and 90th Battery antitank guns, all deployed to guard against counterattacks and lend firepower for the next day.[3]

DECEMBER 21

When the sun rose, obscured by gray seaside dampness, Lieutenant-Colonel Jefferson and Brigadier Hoffmeister remained confident that the Peony barrage had got them past the worst of their mission. The Edmontons and Three Rivers tanks set out to clear the Germans out of Ortona, with the Seaforth company on the bluff operating under Edmonton Regiment command. At 7:48 in the morning Jefferson reported to Brigade that they were "halfway through town" and "all [was] going well." In fact, they were only halfway along the two-kilometer-long and five-hundredmeter-wide Ortona promontory, amid the more dispersed buildings on its southern half. (In 1943 the densely constructed city center covered only the promontory's northern half.) The Germans were contesting the advance with machine guns sited in buildings, but the Three Rivers tanks were "dealing with [those]." Lt. Col. J. S. Ross, commanding 2 Brigade's supporting 3rd Field Artillery Regiment and serving as Brigadier Hoffmeister's artillery advisor, directed two full field regiments, a total of forty-eight guns, to concentrate fire along the exposed and lengthening left flank to isolate the attack area. Loyal Eddie riflemen and light-machine-gun teams, covered by Three Rivers Sherman tanks, then pressed through the dispersed buildings, closing the distance to the more densely constructed town core. An hour later Jefferson reported that the necessity for cooperation between armor and infantry to destroy machine-gun nests situated in buildings was "taking a lot of time." German snipers and antitank guns lurked in the shelter of buildings on Ortona's southwestern edge, playing havoc with Maj. Jim Stone's D Company fighting building to building on the inland side of the main road.[3]

The Seaforth C Company joined the dawn assault and seized the cliffside Santa Maria di Costantinopoli church before attempting to press toward downtown Ortona and link up with the Loyal Eddies. By midday the Loyal Eddies and Three Rivers tank crews had reached the south end of Piazza Vittoria, "the first city square," where Stone's D Company survivors infiltrated along a ditch under cover of 2-inchmortar smoke bombs to the large, four -story Iris Hotel on the southwest corner. The hotel, one of Ortona's tallest buildings on its highest ground, commanded the landscape in all directions. The Edmontons fought up to the uppermost floors and then used them as a base from which to attack and control adjacent buildings. [1] The Seaforth company slowly battled northwestward toward Piazza Vittoria from their cliffside church bridgehead. In midafternoon, Jefferson reported to Brigade HQ that the "best OP [observation post] in town is in our hands." [2]

Capturing the Iris Hotel that day was consequential. It became the key Canadian control point for the next week, but the struggle for it marked the real opening of urban combat in Ortona. The action coincided with the forward movement of the Canadian artillery batteries, owing to which they were out of action for much of the day. It took all afternoon to take control of buildings around Piazza Vittoria. [3] Rushing separated buildings in the south end on December 21, before 2nd Brigade's full power and support weapons could join, cost the Edmontons, already reduced by two weeks of steady combat, three killed and twenty wounded. At last light Jefferson reported the need to reorganize his battalion from four to three companies of only sixty men each. Indeed, the whole of 1st Canadian Division suffered from a shortage of reinforcements, because bad weather, German air attacks, overextended administrative services, and lines of communications not yet firmly reestablished after the December transition from pursuing a withdrawing enemy to deliberately attacking a prepared defense zone. Replacements from 2 Brigade were on their way forward but could not arrive for days. The reinforcement priority that day was reconstituting badly degraded units in 1 Canadian Brigade so they could open the larger encircling attack. The Edmonton Regiment war diary records the company shake-up as taking place on December 23, but it shows up in the brigade message log on December 21, corresponding to the tough day's fighting between scattered buildings. At the end of the day the Loyal Eddies prepared to assault into downtown Ortona the next morning at significantly below normal fighting strength.

The resistance encountered at Piazza Vittoria on December 21 combined with defensive preparations that became visible that afternoon left no doubt that trouble lay ahead. German engineers had demolished buildings at the end of a dozen-odd side streets leading north, downtown. The only opening along a high wall of rubble and demolished apartmentblock ends was the main high street, Corso Vittorio Emanuele, which lay "free of barricades for some 300 yards." The defenders offered a choice of attacking into probably well-defended buildings on either side of the street or surging down the open route into an equally likely ambush. The Germans had chosen the location carefully to shape the defensive battle to come, creating a four-hundred-yard wall across the narrowest part of the north–south Ortona promontory. On the inland (west) end, the plateau dropped into a steep, exposed fifty-yard-deep ravine, while on the seaward, east side it plummeted seventy-five yards to a small harbor.

The Germans' arrangements clearly revealed that their main line of resistance was firmly anchored inside Ortona and not eight kilometers north in the Arielli River valley. Probes by 8th Indian Division to Villa Grande and patrols by 1st Canadian Brigade onto the flat spur met German troops displaying similar intentions to stand firm, on the Villa Grande–Ortona line. Across the Canadian front German defensive works included the most extensive minefields and explosive-trap network yet encountered by Canadian troops in the Second World War.

That night, 2 Brigade units ate, replenished ammunition, scouted, planned, and rested as best they could in preparation to attack the prepared urban defense zone. Canadian engineer companies and infantry pioneer cleared hundreds of mines and explosive traps from essential routes and assembly spaces, all under a steady barrage of German shell and mortar fire that disrupted everyone's work and sleep. Hoffmeister ordered another company of the Seaforth Highlanders to reinforce the Eddies and prepare to press westward from Piazza Vittoria to secure the inland flank of the Canadian foothold in Ortona's south end. The rest of the Seaforths, led by their former second in command, acting Lt. Col. Syd Thomson, assembled around Santa Maria di Costantinopoli in readiness to join the action. The problem now was that Brig.-Gen. Dan Spry's 1 Brigade could not complete the reorganization necessitated by the bloodletting of December thus far and preparations for the December 22 attack until the end of the day. Only 8th Indian Division had units in position to attack Villa Grande that morning.

DECEMBER 22

Meanwhile, inside Ortona, three small Loyal Edmonton companies, their Three Rivers tank squadron (replenished with ammunition and fuel), and 4 Engineer Field Company planned to pressure the German defenders in downtown Ortona as best as they could until 1st Canadian Division could mount a full attack the following day. They saw the gap in the rubble wall for the carefully prepared urban kill zone that it was. Major Stone pitched a plan to charge boldly all the way down the throat of the obvious kill zone to get behind the main line of Germans guarding the long rubble wall. Stone recalled, "I talked to my commanding officer, and I suggested to him that [since] the Germans use noise to create an effect, diving Stukas and 'Moaning Minnie' mortars, that perhaps we could try the same thing." [1] Jefferson supported Stone's plan and at last light on December 21 explained to Brigade HQ his intent "to push through right of town after first light with tanks." The open Corso runs along Ortona's right or eastern side, just a few narrow blocks from the seaside bluff. Lieutenant Colonel Ross ordered his experienced 92 Battery commander, Maj. E. L. de Pencier, to the top of the Iris Hotel in Piazza Vittoria to maintain a standing artillery observation post with Jefferson's forward command post, in readiness for a dawn barrage against "selected targets until 0730." That would signal the rush down the Corso, "when our companies with tanks will pass through (or bypass) right of [i.e., the right, or east, side of] town." [2]

Loyal Edmonton Regiment optimism in the face of the elaborate German defenses that lay before them seems to have been rooted in a sense that the larger divisional and corps attack would settle matters west of Ortona. That morning, 8th Indian Division attacked Villa Grande five kilometers inland behind a heavy corps artillery barrage. [3] Major General Vokes held a conference at 1 Brigade's headquarters, finalizing Canadian assault plans to envelop Ortona the next day. "The operation in the morning [for December 23]," he stated, "is designed to force the enemy to withdraw from the positions he still holds in and around

Ortona."

Perspectives on what happened inside Ortona that morning vary considerably. The Official History of the Canadian Army version is based on the brief Loyal Edmonton war diary entry, composed days after the event. It describes the clearing of fortified houses on either side of the Corso, building by building and block by block, adding that only "by nightfall … the Edmontons [had] reached the Piazza Municipale," six blocks and three hundred yards north. Major Stone's postwar interview aligns with the Brigade radio logs, which state that the day started with a charge down the open Corso: "And so the squadron of tanks came up, one troop with my company, started through the town in low gear, with sirens screaming, and the main armament firing forward down the road into houses on each side, and other armaments shooting sideways while we travelled under that fire forward." The Edmonton company, tucked behind the tanks, surged five blocks down the open street to a rubble barricade near the mouth of Ortona's downtown Piazza Municipale. The tank troop leader stopped short of the rubble pile, correctly anticipating the presence of mines and explosive traps around it. Thus began the most famous part of Ortona's urban fight. The advance seems to have disrupted the Germans' ambush plans, as they shot comparatively few Canadians during the rush. Most of the seven killed and eighteen wounded in the assault as a whole were hit later in the day as the paratroopers shifted to meet the penetration of the center of their prepared defensive zone. The heroic efforts necessary to pull mines from around the rubble barricade under cover of smoke grenades so the tanks could press deeper revealed how strongly and deeply the Germans had prepared. The late morning situation near the north end of the Corso was consistent with the Edmonton and other eyewitness accounts of "concentrated MMG [medium machine-gun] fire and strong opposition" from the north sides of the Piazza Municipale.

Thereafter, the Loyal Eddies focused on clearing the five long rowhouse blocks bypassed on their left and right—Jefferson had already designated each of his three small companies to take, respectively, one street on the left and two on the right of the narrow corridor—thus confirming control of the area. Room-to-room, house-to-house fighting began that day. Sgt. A. J. Rudd, an A Company acting platoon commander, described their tactics that day as they started clearing houses from the bottom up. "Covered by Bren [light machine-gun] gunners, the lead sections closed up to the door, the section commander would toss in a '36' or '69' hand grenade and then the section would rush in to clear the bottom floor. We tried to gain the upstairs as soon as possible."

Until the main corps attack began the next day, the urban action in Ortona marked the extended tip of the Eighth Army spear on the main highway through town. Behind the three-hundred-yard long, hundred-yard-wide salient that the Edmontons had pushed into Ortona's downtown core, the rest of 2 Brigade's infantry deployed to guard the 2,500-yard corridor back to the main 1st Division positions around Cider Crossroads. German armored counterattacks had been steady in the Adriatic sector in December, so the threat was real until the full

divisional attack started the next day. The job of guarding the corridor fell to the Patricias, who used their commanding base on the Ciampino heights to patrol across the long rural front between Ortona and 1 Brigade troops around Cider Crossroads. Meanwhile, inside Ortona, Seaforth companies guarded the inland side of the Ortona promontory. [1]

Hoffmeister came forward that morning and described what he had observed to Division HQ: the Edmontons and the Seaforth company "continuing to mop up, with tanks. Street full of rubble and rubble has been mined." Hoffmeister had already visited the Iris Hotel and expressed his satisfaction with how Major de Pencier was "bringing down accurate fire on [the] enemy area and engaging opportunity targets." De Pencier's commanding view allowed him to direct fire on the immediate urban battlefield and the approaches to Ortona, although he was less able to adjust high-angle close support from 25-pounder field guns in the narrow streets. The tight urban spaces needed more direct firepower and mortars. Thus, 2 Brigade HQ focused that day on bringing up more heavy weapons, including 20-mm antiaircraft guns, 4.2-inch heavy mortars, Vickers medium machine guns, and Maj. George "Tiger" Welsh's experienced 90th Anti-tank Battery, in readiness for the following day's assault. The Edmontons wrapped up street-clearing efforts on the Corso at last light on December 22, aside from Jefferson preparing the pioneer platoon to clear mines at the rubble pile under cover of darkness. [2]

The stand of 1st German Parachute Division inside Ortona matched its efforts five kilometers inland at Villa Grande. There, 19th Indian Brigade found another parachute battalion occupying houses and buildings it had prepared as strongpoints. The Indian official history records how after the 19th Brigade's barrage ceased German paratroopers "sprang up the stairways into the open with weapons blazing" and how "quick counter-attacks forestalled every attempt at consolidation." The first attack, by the 5th Essex, was thrown completely out of the fortified village. [3] 2 Canadian Brigade's hold on the Ortona promontory and the town itself was much firmer.

Overall, the first three days around Ortona amounted to a battle for information, to secure the bridgehead over The Gully and to cover the deployment of more units from 1st Canadian and 8th Indian Divisions. Afterward, the stage was set for a corps attack across the front from Villa Grande to Ortona. That night, before dawn of December 23, Brigadier Spry's 1 Canadian Brigade Group, including Ontario Regiment tanks, readied itself for a thrust up the inland spur west of Ortona. At the same time, 19th Indian Brigade prepared to expand the attack at Villa Grande. Plans to push around Ortona's west side did not call for relaxing the pressure exerted by 2 Canadian Brigade inside the town, an omission doubtless intended to fix the defenders and prevent them from shifting west to frustrate the encirclement. The tiring Loyal Edmontons thus made ready to strike inside Ortona at dawn, this time with all companies of the Seaforth Highlanders, now readying to mount a second major thrust fully into the western half of downtown Ortona.

DECEMBER 23

Daylight broke on December 23 shrouded by gloomy fog and showers—rotten weather for a corps attack that depended on long-range artillery observation, tanks, and air strikes for advantage over a strong enemy defending prepared positions. In the gloom, the Edmontons opened an urban assault, more deliberate than that of the 22nd, from the head of their penetration at the south end of Piazza Municipale. Their own 6-pounder (57-mm) antitank guns had proved useful the day before, and their six-gun antitank platoon was reinforced with a four-gun troop from 90th Anti-tank Battery. Its light (a little over a ton), high-velocity guns were manhandled into firing positions by expert crews, accustomed to using them innovatively for any job. The gunners methodically blew down the barricade blocking the entrance into the piazza. Loud crashes from a combination of direct-fire armor-piercing and highexplosive shells set the tone for the day. Engineers cleared mines, and tanks inched up to effective firing positions to join the firefight across Ortona's main square. Buildings were entered by shells first, followed by infantrymen.

Antitank gunners had learned to cave in clay-tile roofs onto German snipers with well-placed 6-pounder shot. As their solid-shot 57-mm armor-piercing shells could not easily penetrate the thickest stone of masonry rowhouses, they fired high-explosive rounds through windows and doors to burst in the interior of structures, in antitank gunners' own version of room-clearing tactics. Seventy-nine Sherman 75-mm guns and machine guns added to the mix, their fire penetrating walls and windows across the square. As Canadian mortar crews launched bombs onto rooftops to neutralize German snipers, field batteries laid down an outer cordon of shell bursts to isolate the Ortona promontory's inland slopes. Under this layered covering fire, Edmonton rifle companies cleared one building at a time, slowly enveloping the square from left and right. The piazza took all day to clear, but these methods kept casualties down to six killed and twenty-eight wounded.

That was the day Canadians began mouse-holing. Loyal Edmonton Capt. Wilmot George "Bill" Longhurst's A Company would describe the first experiments, as members of the battalion's pioneer platoon blew holes through the interior walls of a middle floor in the rowhouses on the east side of Piazza Municipale. "The leading section into this house was the follow-up section. It immediately cleared the floor and manned all windows covering the house on the opposite side of the street. The first section then came through, cleared the next floor up and cleared the bottom floor." Antitank, tank, and mortar crews directed heavy fire against building facades inside the piazza before the Edmontons moved inside. Even heavier Canadian direct fire from a headland at the south edge of town blasted rowhouses northeast of the piazza. There, Capt. Bill Burnett set up 90th Battery's J Troop, equipped with long-range, highvelocity 17-pounder heavy antitank guns, later joined by Lt.-Col. Leslie Booth's Three Rivers Regiment Headquarters Troop. The promontory's crescent-shaped east side offered a clear line of sight and fire from the Canadian

firebase to buildings along the cliffside esplanade running northeast from Piazza Municipale. Seventeen-pounder rounds mixed with Sherman 75-mm high-explosive rounds began taking northeastern Ortona apart by fire.

That morning the Seaforth Highlanders completed their assembly, resupply and reconnaissance to widen 2 Brigade's attack into the west half of town. Acting Lieutenant-Colonel Thomson took up a position in the Iris Hotel with De Pencier's observation post, directly overlooking the streets his unit would attack. By 1:50 in the afternoon they bit fifty yards deep into the first block, "encountering stiff opposition all the way" especially from the west side. They began their own version of mouse-holing using Projector, Infantry, Anti Tank (PIAT) launchers and German antitank mines to blow apertures into buildings. Their antitank platoon came forward, reinforced with another troop of 90 Battery 6-pounder guns. Thus developed the slow methodical combinedarms pattern for clearing Ortona. As each new weapon system added weight of shot to the fight, efforts to synchronize and coordinate fire with movement increased. Battalion headquarters and forward company command posts bustled with that activity.

Staff of 2 Brigade Headquarters tracked progress reports from 1 Canadian and 19 Indian Brigade that day, reflecting hopes the encirclement west of the town would turn the tide. Canadian infantry companies infiltrated northward between Ortona and Villa Grande, rounding up some forty German prisoners, although persistent rain left the ground "very moist" and impossible for Ontario Regiment tanks or heavy support weapons to cross to where the 48th Highlanders of Canada had pushed a narrow salient out over the spur. Farther inland, 19 Indian Brigade's renewed attack established a toehold at the edge of the strongly fortified Villa Grande. Staff of 2 Canadian Brigade staff recorded that "at the end of the day it looked possible that The RCR [The Royal Canadian Regiment] in the third phase of [the] 1 Bde [Brigade] plan would be successful in cutting the coast road north of Ortona and force the enemy to withdraw the strong defence of the town." German higher headquarters begrudgingly acknowledged that the Canadian "well-supported attack" had forced it to abandon the "more remote and southernmost portions [of Ortona] after exceedingly hard fighting." [1]

DECEMBER 24

That night, the Germans reacted strongly to the day's Canadian and Indian attacks. Reinforcements in the form of corps and army artillery and Nebelwerfer rocket mortars unleashed their heaviest barrage yet. By the time the sun rose on December 24, yet another cold day shrouded by wet clouds, 1st German Parachute Division had reinforced its line with all available units and was infiltrating and counterattacking everywhere. 19th Indian Brigade threw a second battalion into Villa Grande to reinforce the hard fight around the village church, but it was not enough to tip the balance in its favor. In short, the day was one of "thrust and counter-thrust." [2] On the spur beside Ortona, German paratroopers in the strongly fortified hamlets of San Tommaso and San Nicola counterattacked and infiltrated between the Hastings and Prince Edward Regiment and the 48th Highlanders. Brigadier Spry's headquarters staff reported

that their key problem was that "no tanks are forward of HPE [Hastings and Prince Edward Regiment]. Ground is very bad and engineers have been hampered by the fight that goes on within positions." The German countermoves consequently drew The Royal Canadian Regiment into the fight to hold the salient, forestalling its attack toward Ortona. [3]

Inside Ortona, the Seaforth Highlanders met the fresh 2nd Battalion 4th Parachute Regiment. The Germans counterattacked across the Seaforth three-hundred-yard urban front by means of infiltration parties that closed in with grenades, machine pistols, and demolition charges. The Highlanders' regimental history records, "A/Lt-Col. Thomson made his way to the company positions and, although constantly exposed to sniper, machine-gun, and mortar fire, remained with the forward troops, directing and coordinating the defence, and showing a cheerfulness and coolness under fire which did much for the men beating off the attack." Four hundred yards northeast, the Edmonton combinedarms team continued its deliberate advance from Piazza Municipale along "very narrow lanes and streets" toward Piazza Plebiscito, all of two blocks away. The Edmonton war diary sums up this action: "The enemy resistance stiffens, fresh troops reinforce the garrison, a flame thrower is used against us." Tankers and gunners at 90th Battery's cliffside firebase saw the flame from a building on the esplanade and promptly opened fire. The brigade log recorded, "Building from which flame thrower was operating demolished by tanks and anti-tank guns. No more flame thrower." Small successes, however, failed to overcome the enhanced German defense of Piazza Municipale's northern exits. Wounded German prisoners revealed that a fresh company had reinforced the defense there, having come up through railway tunnels from "some forward camp 3–5 kilometers north of Ortona."

The injection of 2nd Battalion 4th Parachute Regiment to check the Seaforths on Ortona's west side around Piazza San Francesco formed a rough German urban front line connecting with 2nd Battalion 3rd Parachute Regiment at the north end. The reinforced line in Ortona linked up with 1st and 3rd Battalions 3 Parachute Regiment, which together defended the spur and the hamlets of San Tommaso and San Nicola. There the German front line arched south to the fortress at Villa Grande and more 1st Parachute Division units, setting the stage for an intense slugging match. The German decision to reinforce that line turned Canadian priorities inside Ortona to resupply, reinforcement, management of the tempo of work, and assessment of the risk of losses among tiring, depleted units. Since the first days of the battle, tanks and Bren-gun carriers had run an armored ferry system, on paved, well-drained roads, bringing ammunition, water, and food forward and taking wounded back to the rear. The early capture of the south-end high ground and buildings established a protected Canadian sustainment base and main supply route back to rear dumps in The Gully and Moro River valley south of Ortona. The Germans likewise benefited from a safe supply line and base area, employing railway tunnels underneath the high promontory and the deep gully at the northwest end.

Thus, both sides pushed a steady stream of munitions into the urban center, maintaining thereby a continuous deafening roar of high-caliber artillery blasts, explosions, and automatic-weapons chatter. One key commodity that became limited that Christmas Eve was field- and medium-artillery ammunition. Allied operations farther inland and on the approaches to Cassino competed for ammunition priority. A limit imposed of thirty rounds of 25-pounder and twenty-five rounds of medium 4.5- and 5.5-inch shells per gun per day was to have consequences for 1 Brigade infantry, dug in on the spur. Fortunately for 2 Brigade Group, there was no shortage of tank and antitank gun ammunition, demolition charges, grenades, or bullets, although mortar ammunition availability fluctuated.

The tougher tasks were resting and feeding weary soldiers and integrating replacements. Replacements finally arrived at 2 Brigade on December 23 and 24 to reconstitute units suffering from costly actions earlier that month. The badly needed reinforcements consisted of trained but untested soldiers along with veterans who had recovered from wounds or illness. There could be no waiting for an operational pause to introduce new soldiers properly, so Canadian NCOs and junior officers did their best to integrate them into weary companies behind embattled streets. Seventy-five went up to the Edmontons and ninety to the Seaforths that day. Likewise, divisional quartermaster staff had been planning since December 20 for the provision of fresh food, treats, and mail for Christmas dinner. Royal Canadian Army Service Corps troops prepared to deliver feast supplies for a division engaged in its closest-ever contact along a four-kilometer front. [1]

If the Canadian forward momentum slowed on Christmas Eve, the battle intensity did not. The Seaforths fought for buildings around Piazza San Francesco, infamously known as "Dead Horse Square" for the sad animal casualties of war lying amid the wreckage. "A Company reported that they had one section in the church bitterly fighting the Germans who were at one end of the church" on the west side. Another section fought into the school on the piazza's east side, "but the enemy blew prepared charges under the building, burying 6 of the men." Seaforth infantry shared occupancy with German paratroopers in several buildings around the Piazza San Francesco that night. The Edmontons reported some progress, with "several more city blocks in our hands. Street fighting continues very fierce." Out on the spur, 1 Brigade units fought off more counterattacks, cleared out German infiltrators, and took steps to press out of their narrow salient toward Ortona as soon as possible. [2]

DECEMBER 25

The prospects of 1 Canadian Brigade depended on better weather. Christmas Day brought little respite. The brigade war diarist commented that it "was just like typical English Christmas weather, rain and mud." Nonetheless, they tried. Patrols from 48th Highlanders probed toward the fortified hamlets of San Tommaso and San Nicola. With the Highlanders covering their left, The Royal Canadian Regiment, hastily reconstituted with replacements, slogged off

through the mud toward a lateral road connecting Ortona to Villa Grande. Maj. Strome Galloway later wrote that he and his men made it "800 yards through tangled, rain-swept vineyards and suffered heavily" to reach relative safety in stone farm buildings. Even out on the open spur German paratroopers fought from the protection of other such buildings along the next dirt road to the north. German counterattacks to evict the Royals "fizzled out" in the rain. [3] As awful as was their plight on the exposed spur, on Christmas Day seven Indian, British, and Canadian battalions were in contact, building pressure along the whole 1st Parachute Division line. Its attempts to eliminate the Canadian infantry salient between Ortona and Villa Grande spent German lives but failed. The arrival of seventy Saskatoon Light Infantry mortarmen laden with food, ammunition, and other supplies guaranteed that the future Canadian wedge would push between Ortona and Villa Grande.

At Villa Grande 8th Indian Division redoubled its efforts on Christmas Day. Troops of 5th Essex and 3rd Battalion 15 (i.e., 3/15th) Punjab Regiment fighting inside the village were reinforced by the 3/8th Punjabis and the Royal West Kents. Muddy approaches there necessitated resupply by mule, presenting a sustainment problem similar to that of 1 Canadian Brigade. The Indian division history describes Christmas Day as "a gangster's battle from window to window, from door to door. Ammunition began to run low." Nonetheless, mule trains carrying boxes of grenades and small-arms ammunition made it through the gauntlet to replenish the four Indian battalions engaged. "The ring around Villa Grande tightened."

Inside Ortona, Christmas morning saw the Loyal Edmontons poised at the south end of the key Piazza Plebiscito, from which the main roads northward from Ortona exit. The Germans had placed the second battalion of 3 Parachute Regiment there to hold the vital crossroads. Narrowing streets in this oldest part of Ortona limited where tank crews could push their Shermans. Only one troop could deploy so as to fire into the piazza on the south side. Lieutenant-Colonel Jefferson ordered one company and the tanks to work at the piazza while the other two companies cleared streets overlooking its piazza's east side. These streets led into Ortona's oldest section on the highest part of the promontory around the cathedral of San Tommaso. The characteristic old-world urban landscape of this area rendered all the more important the antitank gunners and PIAT launchers. Six-pounder crews rolled guns up rubble ramps to get clean shots, and 90th Battery towed two heavy 17-pounder antitank guns downtown to deal with German-held buildings at Piazza Plebiscito (by blowing out structural steel and stone in the four corners of structures) in readiness for a heavier push the next day. The Edmonton Anti-tank Platoon leader, Lt. George Brown, recalled that his men fired so much ammunition that day that "they had to change barrels three times on one of the 6-Pounders."

At the southwest end at Dead Horse Square, 2nd Battalion, 4 Parachute Regiment clung tenaciously to its position to prevent the Seaforths from converging on Piazza Plebiscito. Seaforth control over the south and east sides made it

possible to creep two tank troops into the square on Christmas Day, tipping the scales in the Highlanders' favor. Tank- and antitank-gun fire rocked the embattled church of Santa Maria delle Grazie and an adjacent hospital building on the west side so much that the Seaforth platoons that had won the latter abandoned it "when the building collapsed due to the heavy pounding it received from our supporting tanks." On both wings, 2 Brigade gains in the face of infantryforce parity were modest, obliging it to employ heavy weapons to erode German strength by fire rather than by expending lives in direct assault.

Not far behind the crashing shells, collapsing walls, and ricocheting bullets, combat Christmas dinners were prepared, then served just behind or at the front. Isolated moments of peace occurred even as the systematic reduction of German-held buildings by men at the end of their endurance continued. In that sense, roast pork, mashed potatoes, gravy, chocolate, fruit, and beer became a tonic, enabling the men of the 2 Brigade team to push beyond their normal limits. The Seaforths famously relieved each company, one at a time, to dine and rest in the relative safety of their rear-echelon base in the church of Santa Maria di Costantinopoli. Some Loyal Eddies, Three Rivers tank crews, and 90th Battery gunners likewise slipped back for short reprieves with their meals. Hot meals were delivered to others in frontline buildings. Memories of that day remained etched in the minds of survivors and became legend. The Seaforth war diary recorded events in detail, including how "the Signals Officer, Lt. W. Gildersleeve, played the church organ and, with the aid of an improvised choir organized by the padre, carols rang throughout the church."

DECEMBER 26

More rain fell that night but finally stopped on Boxing Day morning. West of Ortona, British and Canadian tank crews waited anxiously to see whether the water-saturated earth might firm up just enough for their Shermans to move up to support Indian and 1 Canadian Brigade's embattled units. As the tank crews waited, 1st Parachute Division again counterattacked under the cover of the morning gloom: 1st/3 Parachute Regiment attacked the lightly armed 48th Highlanders from the hamlets of San Tommaso and San Nicola west of Ortona, while 3rd/3 Para Regiment struck at The Royal Canadian Regiment's right-hand company where it had penetrated east toward The Gully at the edge of the Ortona promontory. German 170-mm artillery and rocket batteries provided heavy supporting fire.

The paratroopers also counterattacked the Seaforths in Ortona, cutting off two sections. The attack delayed but did not derail Seaforth pressure in the west end of the town. The Seaforths restored their left, recovered some cut-off sections, and resumed their advance toward Piazza Plebiscito with two troops of tanks, ten antitank guns, and mortars. On the northeastern end of the town the Germans had further hardened their positions covering Piazza Plebiscito. Taking a page from Canadian tactics, troops from the Parachute Anti-tank Battalion assembled two 50-mm guns in upper stories of buildings, creating covered fire positions from which they knocked out two Three Rivers Shermans. A third

tank "brewed up" after paratroopers dropped a demolition charge on its top. The Germans also used tunnels under the old north end to shift men and equipment to hold on to the cathedral area to stall Edmonton efforts to flank on the right the Piazza Plebiscito in the streets above. The skillful and stubborn German defense frustrated the Edmonton all-arms team and inflicted losses. It did, however, not stop the ruthless process of clearing blocks toward the cathedral with fire, as antitank gun and mortar crews, and pioneers, blasted or buried German defenders in their strongpoint houses, one building at a time. Canadian field and British medium and heavy artillery joined in to drive the Germans out of their shrinking zone of control. German engineer Bayerlein remembered the day: "Then on 26 December the enemy artillery began firing, and the northern part of the town, still in our hands, came under continuous shellfire; enemy guns fired on the town incessantly, many houses collapsed as if they had been hit by a giant's fist. Yellow and black clouds of smoke darkened the sky. Luckily for us, the enemy shells had a very sensitive impact fuze, most of them exploding as soon as they struck a roof tile."

The diary entry of 2 Brigade praised "the fighting troops and all those supporting them" and also observed that "the town of Ortona from this extensive fire and demolitions by both the enemy and our own troops is now a shambles of shattered buildings and rubble."

What mattered most on Boxing Day 1943 was that the sun began to poke intermittently through higher clouds. Visibility improved, and the spur between Ortona and Villa Grande began to drain and its ground to become firm, albeit slowly. The lightening sky during German counterattacks presented Canadian riflemen, machine gunners, and artillerymen with something clear at which to shoot. Their attached artillery observation officers ranged in on the rich targets, worthy of ammunition despite the shell restrictions. Patrols from the 48th Highlanders later found few prisoners "but many good Germans lying around." Ontario Regiment Shermans began grinding north with, notwithstanding the firming mud, great difficulty. A single troop of tanks reached the 48th at 2:05 in the afternoon and proceeded to demonstrate how three tank main guns and six machine guns can tip an infantry firefight. Together, the Highlanders and Ontario tank crews captured a German platoon's worth of prisoners and counted forty-nine paratrooper corpses. More Ontario Regiment tanks spun tracks through the mud and reached The RCR along the farm road atop the spur before destroying German strongpoints in stone farm buildings that had blocked 1 Brigade's advance for two days. [1] A similar dramatic tank/infantry link-up unfolded in Villa Grande, where a British tank squadron reached Indian and British troops fighting inside the village and again tipped the balance. The Indians reported that "the paratroopers then bolted into the open. As they ran, machine guns brought them down." [2] The tide had turned.

DECEMBER 27

No rain fell that night, and December 27 dawned clear and bright. The positions of 8th Indian Division and 1 Canadian Brigade west of Ortona grew

stronger, benefiting from the tank- and support-weapons fire that 2 Brigade had employed inside Ortona for a week. The Canadian division made ready to renew the assault with fresher troops, such as Ontario's 3 Brigade, which made ready to reinforce the mud-caked 1 Brigade and complete the encirclement. The Princess Patricias prepared to take the lead inside Ortona, but until that handover happened weary 2 Brigade units faced the hottest German fire yet encountered in the town. Their senior gunner, Lt. Col. J. S. Ross, recorded that the Edmontons "were nearly played out." He did his best to help by calling artillery "Mike" targets on the north end—that is, all twenty-four guns in 3 Field Regiment would lay concentrated 25-pounder gunfire on the same cluster of buildings. This high-angle fire complemented continuous tank- and antitank-gun fire from the cliffside firebase. The Edmonton mortar platoon hurled 1,100 3-inch mortar bombs into the shrinking German pocket. [3] The Seaforths too began closing in on Piazza Plebiscito from the west side, steadily reducing the number of German-controlled buildings and taking the guesswork out of choosing targets worth concentrated firepower.

German commanders recognized that 1st Parachute Division's losses and buckling positions meant that they must evacuate from Ortona and prepare to fall back into their next major Gustav Line bastion, surveyed and prepared along both sides of the Arielli River valley, with delaying outpost positions on the high features to its front. They covered withdrawal preparations with loud, violent action, suggesting an intent to fight on. Artillery and rocket batteries fired a heavy bombardment, and German engineers detonated massive charges left behind in buildings abandoned to Canadian forward platoons. One came down and buried a Loyal Edmonton platoon alive. A heroic rescue attempt—the unremorseful Germans hurled grenades at the rescuers—recovered four survivors and one body, but twenty more remained unaccounted for. The Edmontons exacted revenge by blowing down two Germanoccupied buildings in a similar way. These acts were symbolic of the cold, destructive nature of the urban fight that ended that day.

German deception efforts convinced Canadian divisional staff that the enemy planned "to counter progress made by our division, by a force up to a Para Bn [parachute battalion], might be [i.e., maybe] to counterattack our salient, or merely reinforcements for the Ortona garrison. Alertness is required now." The false counterattack warning was perhaps a blessing for exhausted forward Canadian units, who were in no condition to pursue aggressively a withdrawing enemy in the darkness. The relieving units were in barely better shape. In any case, early the next morning Italian civilians and Seaforth patrols reported that the Germans were gone.

The urban battle thus ended without fanfare except for the continued crash of heavy guns in the vicinity. The Second World War in Italy had sixteen more bitter months of attritional position warfare left. Eighth Army's Adriatic offensive halted in the face of New Year's sleet and snowstorms; it possessed in any case no decisive numerical advantage. The Italian campaign center of

gravity shifted to the other end of the Gustav Line, around Cassino, for the rest of the winter and spring of 1944. In that sense, December 28 inaugurated the first day of a new chapter for Ortona as a frontline Allied base on a static front under long-range artillery fire.

In the end both sides achieved what they intended in the Ortona–Villa Grande sector, although at a high price in blood and equipment. The Germans had halted the Allied Adriatic offensive inside the Gustav Line defensive belt, enabling Axis forces to retain Rome and central Italy for another five months; conversely, British and Commonwealth forces in Eighth Army had secured a suitable frontline base for an operational pause and helped disperse, fix, and erode the effectiveness of high-quality German formations as part of the Allied diversionary campaign in Italy. This bleak opening of the bloody attritional phase of the campaign perhaps contributed to the postmortem focus on dramatic room-clearing infantry tactics rather than street-wrecking, combined-arms urban positional warfare. That infantry section-level perspective diverts the spotlight from the majors, captains, and warrant officers who coordinated fire and movement in narrow streets, alongside platoon-level officers and NCOs who motivated soldiers to press on in their grim work.

In short, evidence from Ortona emphasizes today how important in the urban fight there was the closest coordination at all leadership levels despite the sense of chaotic isolation remembered by some survivors. Meanwhile, those who experienced it were reluctant to fight inside another large Italian city center. In 1944 the Germans prepared the coastal cities of Pesaro and Rimini as part of the Gothic Line defenses; in both instances, Eighth Army and the Canadian Corps chose to capture adjacent high ground and compel German defenders to abandon the cities before being encircled.

Contrary to modern urban operations theory regarding comparative costs of fighting within towns and in the open, 2 Canadian Brigade's losses across the nine-day battle totaled 306 killed and wounded, whereas 1 Canadian Brigade lost 344 killed and wounded in six days of close action in the muddy vineyards beside Ortona. Weather, exposed positions, and lack of heavy firepower clearly contributed to 1 Brigade's higher tally, but these numbers may also suggest that the Edmontons' and Seaforths' use of Ortona's urban landscape to cover a methodical, fire-heavy clearing process kept daily losses from rising to catastrophic levels in the face of a skillful and lethal German defense. Indeed, 2 Brigade suffered its highest daily loss rates between December 21 and 23, before it shifted tactics. The German 1st Parachute Division recorded 455 killed, wounded, and missing during the same period, and its numbers do not include lightly wounded cases as Canadian figures do. Available figures also do not include losses in attached supporting units or in 8th Indian Division units. More work compiling total multinational losses in the fighting from Villa Grande to Ortona will be needed before it will be possible to establish which side suffered more in the attrition struggle.

Doubtless the group that suffered the most in Ortona were its citizens. Forced

evacuation by the Germans drove most to the equally dangerous neighboring countryside, but some remained hidden in Ortona's basements, cellars, and the railway tunnels beneath the promontory. Many of their stories are told in the town's Museo della Battaglia di Ortona and a few important published works on the subject. Decades later, Canadian veterans of the Italian campaign chose a telling location to build their "Price of Peace" monument to the memory of comrades lost in the December battle for Ortona and its environs. The poignant sculpture stands in Piazza Plebiscito, today a bustling road junction in the oldest part of Ortona, on the commanding promontory that was the epicenter of Canada's famous urban battle. Most buildings now surrounding the triangular piazza were constructed after the war, replacing those blasted to ruins during the struggle for this intersection of Ortona's main thoroughfares. During a moving ceremony there on the battle's seventy-fifth anniversary, Ortona's mayor stood beside Canada's ambassador to Italy, the minister for veterans' affairs, and members of the Seaforth Highlanders to rename the plaza "Piazza degli Eroi Canadesi" (Canadian Heroes Square). The following year veterans of the battle of Ortona accompanied by Canada's Governor General paid tribute to the 1,314 civilians killed—during not only the December battle but also the subsequent four months, when Ortona, only a few kilometers behind the front line, was still within artillery range and littered with explosive traps and unexploded ordnance, offering only damp winter privation and disease. The long list of Ortona's wartime civilian fatalities powerfully demonstrates how often modern battles rage in or near populated spaces.

NOTES

1. Department of National Defence [hereafter DND], Directorate of History and Heritage [hereafter DHH], Canadian Army Headquarters [hereafter AHQ] Report #18, "Information from German Military Documents," 64–65, Library and Archives Canada, Ottawa [hereafter LAC]; LAC, Record Group [hereafter RG] 24-C-3, vol. 13726, War Diary, 1st Canadian Infantry Division [hereafter CID], General Staff [hereafter GS], appendix, Intelligence Summary #29, December 16, 1943.

2. DND, Directorate of Army Doctrine, B-GL-322–007/FP-001 Unique Operations—Urban (Ottawa, 2006), 3.

3. "The Battle of Ortona is a designated national historic event," distinguished by "mouse-holing" tactics. "This Week in History, the Battle of Ortona (1943)," Parks Canada, https://www.pc.gc.ca/ (accessed January 30, 2022).

4. DND, B-GL-322–007/FP-001, 3.

5. LAC RG 24-C-3, vol. 14074, 2 CIB War Diary [hereafter WD] and Message Logs; vol. 14076, 1 Canadian Infantry Brigade [hereafter CIB] Headquarters [hereafter HQ], War Diary and Message Logs; and vol. 14433 WD, 3 Field Regiment, Royal Canadian Artillery [hereafter RCA] WD and Operations Log December 20–27, 1943.

6. For a review of Canadian and British Directorate of Military Training lessons-learned reports from Ortona, see Ian Gooderson, "Assimilating Urban Battle Experience: The Canadians at Ortona," Canadian Military Journal 8, no. 1 (Autumn 2007).

7. 2 Canadian Infantry Brigade Group contained many veterans of Operation Husky in Sicily, during which they fought an important three-day urban battle at Leonforte in July 1943. See L. Windsor, "The Eyes of All, Fixed on Sicily: Canada's Unexpected Victory, 1943," Canadian Military History 22, no. 3 (2013).

8. David Halton and Ted Griffith," CBC News Online, January 1999, updated September 21, 2004, https://www.cbc.ca/news2/background/ortona/griffiths.html (accessed October 18, 2021). Edited excerpted from a field interview; Griffith is an Ortona veteran.

9. Carl Bayerlein, "Parachute Engineers in Combat, Ortona 1943: A German Perspective," Canadian Military History 8, no. 4 (1999): 48.

10. LAC RG 24-C-3, vol. 13370, 1st CID HQ, December 1943; vol. 14074, 2 CIB WD and Message Logs, December 1943; and vol. 13739, 1st CID Assistant Adjutant and Quarter-Master General [hereafter AA & QMG] WD and Message Logs, December 1943.

11. LAC RG 24-C-3, vol. 13370, 1st CID HQ, Intelligence Summaries, December 1943; and AHQ Report #18, 67.

12. "Attacking Ortona: Matthew Halton Reports," CBC Radio News, December 24, 1943, CBC Archives, Toronto; LAC, RG 24, Directorate of Military Training, Canadian; Christopher Buckley, Road to Rome: An Account of MilitaryOperations in Italy, 1943–44 (London: Hodder & Stoughton, 1945; repr. 1993).

13. Fred Majdalany, Cassino: Portrait of a Battle (London: Longmans, Green, 1957), 29–30.

14. Reginald H. Roy, The Seaforth Highlanders of Canada, 1919–1965 (Vancouver: Evergreen, 1969), 266.

15. Gooderson, "Assimilating Urban Battle Experience," 68–70.

16. AHQ Report #18, 63–68.

17. G. W. L. Nicholson, Official History of the Canadian Army in the Second World War, vol. 2, The Canadians in Italy, 1943–45 (Ottawa: Queen's Printer, 1956), 324–32.

18. The Canadian Official History team's consecutive-tactical-action approach is repeated in all chapters of the Italy volume. See Nicholson, 321–38.

19. Nicholson, 323.

20. V Corps Intelligence Summary 257, December 19, 1943, as cited in DHH Canadian Military Headquarters [hereafter CMHQ] Report #165, 178.

21. Eric Reguly, Shawn McCarthy, "Ortona, 75 Years Later: The Tragedy of Canada's 'Little Stalingrad,' " Globe and Mail, December 26, 2018.

22. Gerhard Schreiber, "The End of the North Africa Campaign and the War in Italy." Chapter 4 in Germany and the Second World War, vol. 8, The Eastern Front 1943–44: The War in the East and Neighbouring Fronts. Edited by Karl-Heinz Freiser (London: Oxford University Press, 2017), 1134.

23. German accounts refer to their 1943–44 winter defensive zone as the "Bernhardt Line." The Gustav was the prepared fallback line, anchored at Cassino. Allied accounts refer to the full position as the "Gustav Line," which for consistency will be employed here. Schreiber, 8:1134.

24. AHQ Report #18, 62–65; LAC RG24-C-3, WD, 3 RCA, Intelligence Summaries 30, December 22, 1943.

25. CMHQ Report #165, "Operations of 1 Canadian Infantry Division and 1 Canadian Armoured Brigade, 25 Nov 43–4 Jan 44," 7, 13–14, 27–29; AHQ Report #18, appendix, "Excerpts from Daily Reports, Commander-in-Chief Southwest, 3–31 December 43," 9–10.

26. AHQ Report #18, 59–62.

27. LAC, RG24-C-3, vol. 13726, WD, 1st CID GS, October 1943, appendix, "A Weekly War Commentary by VERITAS," October 27, 1943.

28. See Lee Windsor, "Overlord's Long Right Flank: The Battles for Cassino and Anzio, January–June 1944," in Canada in the Second World War: Essays in Honour of Terry Copp. Waterloo, ONT: Wilfrid Laurier, 2011.

29. LAC RG24-C-3, WD 1st Canadian Division, RCA, appendix 22, "Operation Order No. 2," December 20, 1943.

30. LAC RG 24-C-3, vol. 13370, 1st CID HQ, December 20, 1943; and vol. 14074, 2 CIB WD and Message Logs, December 20, 1943.

31. LAC RG24-C-3, vol. 14433, WD, 3 RCA Operations Log, December 20, 1943.

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33. LAC RG 24-C-3, vol. 14074, 2 CIB WD and Message Logs, December 1943; WD, Loyal Edmonton Regiment [hereafter LER], December 20, 1943.

34. LAC RG24-C-3, vol. 15256, Seaforth Highlanders of Canada [hereafter SHC] WD, December 20, 1943.

35. LAC RG 24-C-3, vol. 13370, 1st CID HQ, December 20, 1943.

36. LAC RG 24-C-3, vol. 108-N-27 sheet 25, 12th Canadian Armoured Regiment [hereafter CAR] (Three Rivers Regiment [hereafter TRR]) WD, December 20, 1943.

37. LAC RG 24-C-3, vol. 14076, 1 CIB HQ, Message Logs, December 20, 1943.

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68. LAC, RG24-C-3, SHC WD and 2 CIB WD and Message Log, December 23, 1943.

69. LAC, 2 CIB, LER, SHC 1st Cdn [Canadian] Anti-tank [hereafter AT] Regiment, RCA, and TRR 12 CAR WDs, December 23, 1943. The PIAT (Projector, Infantry, Anti Tank) was a man-portable British weapon firing not rockets but shaped charges.

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73. LAC RG 24-C-3, vol. 14074, 2 CIB WD and Message Logs, December 24, 1943.

74. LAC RG 24-C-3, SHC WD, December 24, 1943.

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WILLIAM A. TAYLOR

3

URBAN OPERATIONS DURING THE NORMANDY CAMPAIGN

Cherbourg and Saint-Lô, June–July 1944

THE SEPTEMBER 18, 1944, issue of Life magazine printed a powerful image that came to characterize the difficulty, valor, and sacrifice of urban operations during the Normandy campaign. A lone U.S. Army officer, covered with an American flag, lay dead in a makeshift shrine among the devastated rubble of

the Saint Croix Cathedral in the French town of Saint-Lô. The figure was not publicly identified at that time, but because of the poignant scene and stirring remembrances from witnesses (including Andy Rooney, a young Stars and Stripes reporter who later achieved fame as a CBS journalist) it was eventually revealed that the officer was Maj. Thomas Howie, forever after hailed as "The Major of Saint-Lô." Howie had been killed in the assault on Saint-Lô the day before Allied forces seized the city on July 18, struck down by a mortar shell as he was preparing his men of the 3rd Battalion, 116th Regiment, 29th Infantry Division for the final assault. Maj. Gen. Charles Gerhardt, commander of the 29th Infantry Division, ordered that Howie be the first American soldier to enter Saint-Lô, and comrades reverently placed his body on the hood of the lead jeep crossing into the city.[1] Howie personified the deadly urban operations in Saint-Lô specifically, and more generally the intense fighting during the Normandy breakout, including at Cherbourg. For his boldness, Howie received the French Croix de Guerre and Legion d'Honneur, along with the American Silver Star, Bronze Star, and Purple Heart.

CHERBOURG AND SAINT-LÔ

Map redrawn from Robin Neillands, The Battle for Normandy, 1944 (London: Cassell, 2002), 26–27

This chapter explores the vastly challenging yet supremely important urban operations during the Normandy campaign, including the assault in June 1944 to seize Cherbourg on the Cotentin Peninsula and the drive the following month to take the critical transportation hub at Saint-Lô. The chapter begins by providing a brief overview of the Normandy campaign, situating Cherbourg and Saint-Lô in their overall context as key objectives that required significant operational maneuver to isolate, coordinated combined arms to reduce, and desperate urban operations to secure. An examination of crucial aspects of the Normandy campaign and urban operations related to Cherbourg and Saint-Lô will follow, including an order of battle, a tactical overview, and issues of intelligence, terrain, weapons, leadership, civilians, and casualties. The chapter concludes by evaluating several key lessons learned. Throughout, the chapter will argue that urban operations during the Normandy campaign, including those concerning Cherbourg and Saint-Lô, illustrate the hybrid nature of urban operations in a total war. Just as important as tactical street-to-street fighting were the relentless operational maneuvers that first invested the towns and then the persistent combine-arms support that reduced their defenses prior to the final urban assaults. In this sense, therefore, the Normandy campaign illustrated the value of urban operations as one part of a broader operational approach to seizing valuable locations from a determined foe.

CONTEXT

On June 6, 1944, Allied forces landed in Normandy in a herculean effort that Allied leaders hoped would prove a decisive turning point in the war.[2] Historian Alan Axelrod characterized D-Day as "the biggest and almost surely most

consequential invasion in military history."[3] Operation Neptune, the Normandy landing, began Operation Overlord, the broader plan first to breach northwest Europe and then to advance eastward, a campaign in which, in the event, Allied forces quickly built both mass and momentum, constantly attacked German forces, propelled them eastward, and ultimately defeated them in their homeland. Operation Neptune proved a massive undertaking, involving 160,000 soldiers, 7,000 naval craft, 13,000 aircraft, and 13,000 paratroopers. After one week of deadly and at times desperate fighting, Allied forces on June 12 secured the Normandy beaches and combined them into one unified front.

Once ashore, Allied forces turned to the difficult task of securing France, including Cherbourg on the north coast of the Cotentin Peninsula and Saint-Lô in the Vire River valley, distant fifty-five and thirty-five kilometers, respectively, from the landing beaches. The overall advance inland, which became known as the "battle of the hedgerows," proved extremely arduous; the treacherous terrain impeded Allied movement, ability to see, and coordination but afforded German forces excellent cover, concealment, and communications in primarily entrenched defensive positions. The capture of both Cherbourg and Saint-Lô was essential for Allied logistics in the Normandy campaign: Cherbourg was a major port considered by contemporary observers as "the gateway to the Continent," while Saint-Lô possessed a road junction critical for striking deep into the interior of France and then on to Germany. After a grueling advance northwest up the Cotentin Peninsula, Allied forces captured Cherbourg on June 27. By July, the Allies had landed nearly one million troops, almost 600,000 tons of supplies, and more than 175,000 tanks and trucks in Normandy. On July 19, Allied forces finally secured Saint-Lô and thereby fatally pierced the overall German position. The German defensive lines quickly crumbled. From August 12 to August 21 in the Falaise Pocket 60,000 German troops were killed or captured, an estimated 20,000 to 40,000 more narrowly escaping.

ORDER OF BATTLE AND TACTICAL OVERVIEW

Gen. Dwight Eisenhower, Supreme Commander of the Allied Expeditionary Forces, led the overall effort, while Lt. Gen. Omar Bradley commanded the American forces. On D-Day more than 150,000 Allied troops landed across five beaches. The U.S. 4th Infantry Division landed on Utah Beach, the U.S. 1st and 29th Infantry Divisions at Omaha Beach, the British 50th Infantry Division at Gold Beach, the Canadian 3rd Infantry Division at Juno Beach, and the British 3rd Infantry Division at Sword Beach. The U.S. 82nd and 101st and British 6th Airborne Divisions supported the Normandy landings on the western and eastern flanks.

A large and experienced German force opposed the invasion. Field Marshal Gerd von Rundstedt held Supreme Command West, and Field Marshal Erwin Rommel commanded Army Group B. The German 243rd Division, 91st Airborne Division, and 709th Division guarded the Cotentin Peninsula, the 352nd Division defended Omaha Beach, the 716th Infantry Division fortified the area between Omaha and Gold Beaches, and the 21st Panzer Division took up a

reserve position at Caen.

To seize Cherbourg, Maj. Gen. J. Lawton Collins commanded the U.S. VII Corps, including the 4th, 9th, and 79th Infantry Divisions. Maj. Gen. Raymond Barton led the 4th Infantry Division, Maj. Gen. Manton Eddy the 9th, and Maj. Gen. Ira Wyche the 79th. To seize Saint-Lô, Maj. Gen. Charles Corlett commanded the U.S. XIX Corps, composed of the 29th, 30th, and 35th Infantry Divisions. Maj. Gen. Charles Gerhardt led the 29th, Maj. Gen. Leland Hobbs the 30th, and Maj. Gen. Paul Baade the 35th.

Allied planning for the Normandy invasion specified that once landing forces had secured a lodgment, assault forces would proceed to secure the Cotentin Peninsula and its major port city of Cherbourg and then within three months pierce France's interior, through such road-network hubs as Saint-Lô. On June 10 the U.S. VII Corps began its advance across the difficult terrain of the Cotentin Peninsula, seeking to isolate it prior to VII Corps' movement toward Cherbourg. The U.S. 101st Airborne Division seized Carentan on June 12. Two days later, VII Corps pressed west across the peninsula; the 9th Infantry Division seized St. Sauveur-le-Vicomte on June 16. On June 17 and 18 U.S. forces, primarily the 9th Infantry Division, after a week of heavy fighting finally separated German forces on the peninsula from those elsewhere in Normandy. On the 18th VII Corps turned north toward Cherbourg, Bradley having ordered the U.S. First Army to renew its assault on that city, while the British 2nd Army, commanded by Lt. Gen. Sir Miles Dempsey, set out toward Caen.

As a result, the U.S. VII Corps spent June 18 preparing its offensive north toward the coast to seize Cherbourg's vital port.[1] Early on the morning of June 19, it attacked north along the entire peninsula, with the 9th Division on the left flank, the 79th Division in the center, and the 4th on the right. Obstructing the way toward Cherbourg were elements of four German divisions, widely scattered and largely disarrayed, especially after Allied forces insulated the peninsula but greatly benefiting in the difficult terrain from formidable established defenses. Elements of the German 243rd Division stood to the west, portions of the 77th and 91st Divisions held the center, and the 709th Division was dug in to the east. Still, and notwithstanding that elements of four German divisions were present, military historian Robert Citino has estimated that "in terms of their actual fighting strength … they didn't add up to much more than a division and a half."[11] On June 19, the 9th Infantry Division made swift progress on the left, but the 79th Division in the center and 4th on the right encountered stiff resistance. By the 21st the three divisions had surrounded the heavily fortified port city, demanded the surrender of its defenders, and were preparing to assault it. The German commander Lt. Gen. Karl-Wilhem von Schlieben, refused to surrender, and beginning on June 22 Allied forces assaulted the stout outer defenses, finally breaching them on the 24th. For the next three days, U.S. forces assailed the inner city.

On June 24, General von Schlieben, in a communication to the German High Command that Allied intelligence intercepted, admitted the fraught situation

his forces faced: "Communications to several battalions no longer possible. Phosphorous shells have put eight batteries out of action. Tomorrow heavier enemy attacks expected.… Completely crushed by artillery fires."[12] On June 25, the 79th Infantry Division stormed Fort du Roule, one of the most prominent features defending Cherbourg. In one of the numerous acts of individual heroism, Cpl. John Kelley from Company E, 314th Infantry scampered up the steep rocky hill toward a machine-gun emplacement that had stalled his unit's advance and exploded a ten-foot pole charge at the opening to the strongpoint. There was no major effect, so, remarkably, he returned to his unit, picked up another pole charge, and repeated his tactic under withering fire, this time damaging the German guns. Still unsatisfied, Corporal Kelley then scaled the incline a third time, blasting ajar the strongpoint, tossing grenades inside, and compelling the surviving German defenders to surrender. In doing so, Corporal Kelley helped invigorate the attack of his regiment and facilitated the capture of Fort du Roule.[13] This position represented the final obstacle to entering the city, which had proved unfeasible until the fort's many guns directly overlooking the city had fallen silent. Even so, it took Allied forces another day to root out all the Germans from Fort du Roule and end their withering fire on American soldiers below in the city. Sensing that their hold on Cherbourg as a whole was now tenuous and desperate to lessen its potential value to the Allies, German defenders spent much of June 25 destroying the city's key facilities, especially in its port.

Late on the same day, the 4th Infantry Division seized the lightly defended eastern portion of Cherbourg, and the following day the 79th and 9th Divisions cleared the heavily defended west of the city. American troops advanced slowly from house to house and street by street, constantly harassed by small-arms fire, snipers, and mortar barrages from surrounding buildings and remaining pillboxes. Even so, they advanced through the city proper fairly quickly, reaching the beaches to the north by midday. General von Schlieben and Adm. Walter Hennecke, Naval Commandant Normandy, capitulated on the 26th. The next day, Allied forces assaulted Cherbourg's heavily defended arsenal, an imposing rampart protecting the port, replete with towering walls, curved parapets, and even a moat. By the morning of June 27, the 9th Infantry Division had captured the arsenal, thereby securing the essential port. Unorganized yet fierce German resistance continued unabated; stubborn German soldiers skirmished in the vicinity of Cherbourg for four days after the official surrender by their commander, several thousand assuming defensive positions in the heavily garrisoned Cap de la Hague to the west. From June 28 to July 1, the 9th Division advanced northwest up the cape and, by July 1 U.S. VII Corps had secured the entire Cotentin Peninsula.

U.S. First Army, commanded by Lieutenant General Bradley, then commenced operations to seize Saint-Lô, potentially an excellent launching point for the assault into the interior of France by virtue of its important road networks. Its capture would facilitate Operation Cobra, the Allied effort first to achieve and then to exploit a breakout from Normandy. Standing in Bradley's way was a

determined German force, comprising mostly elements of the 352nd Infantry Division, which had now fallen back from its initial positions defending Omaha Beach to Saint-Lô and the dominating hills surrounding it, especially Hill 122 to its north, Martinville Ridge to its northeast, and Hill 192 to its northeast. The German 3rd Parachute Division reinforced the 352nd Division in defense of Saint-Lô. On July 3, Bradley moved his forces across a wide front, U.S. VIII Corps, led by Maj. Gen. Troy Middleton, proceeding toward Coutances to the west while VII Corps, commanded by Lt. Gen. J. Lawton "Lightning Joe" Collins, XIX Corps, led by Maj. Gen. Charles Corlett, and V Corps, Maj. Gen. Leonard Gerow, moved toward Saint-Lô. By July 7, however, 1st Army, headed by VII Corps, had moved less than 2.5 miles at the cost of several thousand casualties.[1]

To counter the Allied onslaught, Rommel ordered the Panzer Lehr Division from Caen to Saint-Lô. It began its redeployment on July 7, arrived two days later, and launched a deadly counterattack on the 11th. The bocage, the extensive hedgerows that characterized the terrain throughout this portion of Normandy, was indiscriminate, hampering tank operations of American, British, and German forces alike. On July 11, the U.S. V Corps, specifically 2nd Infantry Division, assaulted Hill 192, supported by a massive artillery barrage that destroyed the sparse German defense. U.S. 1st Army renewed its attacks on Saint-Lô the following day, with the 29th Infantry Division spearheading the assault on the city from the east, while the 35th Division seized the high ground to the north, most critically Hill 122, on July 16. By the 17th the 29th Division was approaching the outskirts of the town. Consistent with their staunch resistance throughout, the defenders used the city's features to make the Allies pay dearly for every yard gained. German soldiers positioned MG42 machine guns in cemeteries, buildings, and amid piles of rubble, while snipers using Karabiner 98K rifles fired from multistory buildings and rooftops throughout the city. XIX Corps captured Saint-Lô on July 19. Shortly thereafter, on the 25th, 1st Army commenced Operation Cobra, seeking to convert the seizure of Cherbourg and Saint-Lô into a general breakout from the Normandy beachhead, a momentous goal it achieved on the 27th. By the end of July the urban operations of Cherbourg and Saint-Lô had paid huge dividends to the overall Normandy campaign. The U.S. 4th Armored Division seized Coutances on the 28th and arrived at Avranches two days later, thereby collapsing the German defensive lines and setting the initial conditions for trapping large German forces in the Falaise Pocket in August.

Intelligence

Prior to the Normandy landings, the Allies mounted a highly successful deception campaign, Operation Fortitude, convincing the German High Command that the highly anticipated cross-Channel invasion—something that both sides had known was coming for more than a year—would occur at the Pas de Calais, because of its large port, rather than on the Normandy beaches. As historian Gerhard Weinberg has explained in his monumental study, "Even after the

Normandy landing, this continued to be the German belief all during June and July; it was only at the end of July that it began to dawn on them that no landing in the Pas de Calais area was planned at all."[1] Allied disinformation thus proved critical in hampering German intelligence assessments and greatly contributed to the overall outcome, as German leaders held reserves to defend the Pas de Calais from an attack that never came. The Allies' own intelligence proved no more useful in the move on Cherbourg. Allied estimates of German forces on the Cotentin Peninsula wildly varied, from two thousand troops to as many as 40,000.[1] The disorganized nature of the German defense—many units became separated and intermingled once Allied forces isolated the peninsula—also contributed to Allied confusion about the exact number and disposition of German defenders awaiting them. Intelligence, however, played a critical role during the fighting for Saint-Lô, warning Bradley of a counterattack planned by Rommel for the vicinity of Hill 122. Bradley reinforced the Allied position with portions of the 9th Infantry and 3rd Armored Divisions to blunt the final German counterstroke intended to recapture Saint-Lô.[1]

Terrain

Terrain played an even more prominent role. As noted, a major tactical problem was the bocage, running from close to Cherbourg through Saint-Lô to near Alençon in the southeast. If it limited the movement of Allied vehicles and tanks, it afforded German infantry exceptionally fine concealment from which to mount a fierce and determined defense. The result was arduous combat and sluggish progress toward both towns.[1] As military historian Daniel Champagne explains, "Some of the best German defenses in Normandy were not built by Field Marshal Erwin Rommel but by farmers more than one thousand years before the battle."[1] In addition to the bocage, the Cotentin Peninsula's rocky hills and cavernous valleys rendered forbidding the German defense, especially to its north around Cherbourg. In addition to intimidating natural landscapes, Cherbourg was surrounded by myriad formidable man-made barricades, including an arc of heavy fortifications running from the Cap de la Hague on the west to Cap Lévy on the east, stretching some five miles past the city's outskirts. One of the most prominent of these fortifications was Fort du Roule, a nearly impregnable multilevel fortress built directly into the imposing rocky precipices that dominated Cherbourg from the south. Defenders in Fort du Roule could fire both southward, from the numerous pillboxes that dotted its highest point, and with artillery northward toward the harbor, with imposing coastal guns and accurate artillery pieces positioned in Fort du Roule, carved into the hills.

As for Saint-Lô, the Vire River, flowing northward toward Omaha Beach, passed to the east of the city overlooked by high cliffs. In a grim twist of fate, the relentless Allied bombing, utterly leveling Saint-Lô, aided German tactical resistance even while it impeded the attackers' operational movement. Historian Stephen Bourque observes, "As the Americans approached, the rubble ironically facilitated the German infantry's defenses, allowing them to create stronger and harder-to-find firing positions, as they had in Caen."[2] Throughout

the hedgerows countryside were many sunken roads running between the fields, allowing the Germans extensive and largely hidden movement. Nonetheless, during the Normandy campaign generally, Allied air superiority, especially massive aerial bombardments on Cherbourg, hindered the defenders' communications and depleted their morale.

Weapons

The German forces employed highly effective weapons, most prominently the MG42 machine gun and the 88-mm artillery piece. The Mashinengewehr 42, or MG42, was a machine gun that, firing 7.92-by-57-mm Mauser ammunition, proved extremely lethal during the Normandy campaign, and indeed throughout the entirety of World War II. With a rate of fire of a thousand rounds per minute and an effective range up to two thousand meters, the weapon was devastating to advancing infantry, especially when concealed in such difficult terrain as the bocage or in urban settings in pillboxes, buildings, or on rooftops. Likewise, the German 88-mm gun, originally designed as an antiaircraft gun, as the 8.8-cm Flak, and soon employed also as an antitank weapon, proved one of the most versatile, and deadly, weapons of the war. German defenders in Normandy proved quite adept at using "88s," as Allied soldiers came to know them, to destroy advancing vehicles and terrorize vulnerable infantry. Other weapons included the highly feared Nebelwerfer, a powerful, six-barreled mortar. German forces, especially in Cherbourg, combined these weapons in concrete pillboxes, often placing MG42s, mortars, and 88s inside such fortifications and 20-mm antiaircraft guns on their roofs. When not engaging Allied aircraft, German soldiers trained the 20-mm guns on advancing American infantry and vehicles with devastating effect. Finally, the American M4 Sherman tanks, primarily of the 3rd Armored Division, proved much less capable but far more numerous than the German tanks opposing the infantry advance toward Saint-Lô.

Allied forces achieved air supremacy from the outset of the Normandy campaign, with poor weather the only factor diminishing their advantage. To seize Cherbourg Allied forces combined naval, air, and artillery fire to support the intense urban infantry operations. For the massive aerial bombardment of the ring of fortifications protecting the city the 2nd Tactical Air Force of the Royal Air Force (RAF) flew Hawker Typhoons, and the U.S. Ninth Air Force deployed P-38 Lightnings, P-47 Thunderbolts, and P-51 Mustangs, as well as B-25 Mitchell and B-26 Marauder medium bombers.[21] On June 22, in preparation for the final assault on Cherbourg, Major General Collins called on the entire IX Bomber Command—eleven groups totaling nearly four hundred aircraft—to lay waste to the city's battlements, which the bombers did unopposed, thanks to complete Allied air supremacy.[22]

Likewise, Operation Cobra utilized a massive aerial bombardment (in some cases inflicting casualties on U.S. forces) to allow unfettered maneuver for infantry and armored divisions breaking through and then breaking out. The prebreakout air bombardment was particularly devastating. It was both massive, four thousand tons of munitions, and highly concentrated—as 1,800 heavy bombers, another

300 medium bombers, and 350 fighters targeting an area smaller than seven thousand square yards. Historian James Holland notes, "If the Germans had had any remaining doubt about the overwhelming fire-power of the Allies, they would no longer have any after this attack."[23] The ferocious aerial onslaught destroyed the German forces in these narrow confines.

Leadership

The German failure to stop the Normandy landings at the water's edge—largely owing to the German High Command's mistaken interpretation of them as merely a diversion—combined with the unexpectedly early seizure of Cherbourg's port and the subsequent capture of Saint-Lô's road network hub constituted a major blow to German morale. On the verge of losing control of Cherbourg, German troops destroyed as much of its port as possible, dealing a heavy setback to Allied plans and morale. Even with a delay of more than a month to repair the port, however, the seizure of Cherbourg buttressed the vulnerable Normandy beachhead and ensured the Allies' ability to sustain their subsequent drive east.

Throughout the Normandy campaign, German leadership became quite reactive, refusing to concede even the possibility that the Allies had launched their primary cross-Channel invasion onto the Normandy beaches instead of at the Pas de Calais. Exacerbating matters, the Germans suffered heavy battle casualties among senior commanders during the Normandy campaign, thereby weakening their continuity of command, communications, and overall situational awareness. The commanders killed included Generaloberst Friedrich Dollman (June 28), General der Artillerie Erich Marcks (June 12), Gen.-Lt. Rudolf Stegmann (June 18), Gen.-Maj. Wilhelm Falley (June 6), and Gen.-Lt. Heinz Hellmich (June 17), among others.[2] Importantly, the last three were commanders of divisions on the Cotentin Peninsula defending Cherbourg, killed during the offensive of the U.S. VII Corps. As Robert Citino has shown, "German manpower was irreplaceable, of course, but so too were veteran commanders. In killing off the Wehrmacht's officers, the Allies were gouging away at a key German center of gravity."[2]

Moreover, in the defense of the Cotentin Peninsula German leadership overall proved quite ineffective, the High Command issuing conflicting and contradictory orders. Rommel directed the 77th Division to resist the Allied momentum across the peninsula but then to retire south before it became trapped. Hitler, on the other hand, bade the 77th Division not only to remain on the peninsula and defend Cherbourg at all costs but to hold its position south of the city without moving into the fortress itself, something historian James Holland rightly characterizes as "a ridiculous order."[2] Amid the confusion, General von Schlieben found his forces separated from reinforcements when the U.S. VII Corps cut across the peninsula. As a result of this predicament Schlieben hastily pulled his forces north to Cherbourg, thereby allowing VII Corps to surround them and making the fall of the port just a matter of time.[2] On July 3, the same day that Bradley launched his broad advance to seize Saint-Lô, Hitler suddenly

replaced Field Marshal Gerd von Rundstedt with the less capable Günther von Kluge, not only sowing confusion in the High Command at a critical juncture in the campaign but also degrading its leadership.[2] In addition, the failed German assassination attempt against Hitler on July 20 caused chaos, angst, and mistrust throughout the High Command during a pivotal time in the Normandy campaign.[2]

Civilians and Casualties

By mid-June, political attention among the Allied nations to the Normandy campaign was mounting as Germany fired increasing numbers of V-1 flying bombs—the ominously named Vengeance Weapon 1—toward Britain, causing widespread panic and heightened calls for a breakout. Allied plans had optimistically envisioned the capture of both Cherbourg and Saint-Lô, along with Caen, in only a few days. The failure to secure any of these primary objectives within the first week or even well beyond caused much consternation among generals, politicians, and civilians alike.[3]

As with any urban operation, civilians proved a complicating factor at both Cherbourg and Saint-Lô. Ernest Hauser, war correspondent for the Saturday Evening Post, described Cherbourg, before World War II a scenic English Channel port city of some 35,000 residents, in vivid detail shortly after the battle: "The cadaver of a city is as ugly and upsetting a sight as a human corpse." Fortunately, most of the devastation was to the city itself and not its population. At the time of the battle, only two thousand French civilians remained; aside from those who had already escaped the battle zone, German forces had forcibly removed 1,800 men to prison camps or labor battalions. As the battle unfolded, German troops destroyed the port facilities, as noted, and the city's arsenal, making logistics sluggish for the Allied campaign and rebuilding arduous for the French civilians, who naturally relied on intact structures for employment.[31]

Saint-Lô was a town of some 12,000 residents, many of whom had fled from the horrific Allied bombing that had virtually leveled the place prior to the ground offensive. In the brutal calculus of war, Allied planners prioritized the town's eight significant roads, railroad hub, and key bridge across the Vire River above civilian infrastructure, whether public buildings, shops, or houses.[32] Stephen Bourque puts it plainly: "The army wanted the bombers to destroy the ancient city" consonant with Operation Neptune's "chokepoint" approach of obliterating French towns to prevent German reinforcements from impeding the Allied advance through them.[33]

More prominent in the minds of commanders than civilian casualties were the comparative troop losses. The D-Day landings resulted in roughly 6,500 American and 4,000 British and Canadian casualties, which although heavy were less than those anticipated by Allied planners.[3] The final capture of Cherbourg yielded some 10,000 German prisoners, many of them patients in the city's two major hospitals. Mopping-up operations on the Cap de la Hague netted another

6,000 German captives. Overall, the entire Cherbourg operation cost the U.S. VII Corps slightly more than 22,000 casualties, whereas more than 39,000 Germans surrendered and a vast number were killed, wounded, or missing.[3] Allied forces suffered 15,000 casualties taking Saint-Lô. In its aftermath, Operation Cobra produced many friendly fire casualties, more than one hundred American soldiers killed, including Lt. Gen. Lesley McNair, commander of Army Ground Forces, and 800 wounded.[3] Historian James Holland explained, "Bombs started to fall, eruptions ripped the ground apart, and smoke and dust covered the scene of where McNair had been standing. He was the most senior American general to have been killed in the war so far."[3] Total casualties from D-Day through Operation Cobra were 122,000 for the Allies compared to 117,000 for the Germans.[3]

LESSONS LEARNED

There were many factors contributing to the success or failure of urban operations during the Normandy campaign. Beyond those arising from previous sections of this chapter, there were three key lessons to be learned in the seizures of Cherbourg and Saint-Lô.

One lesson was the vital importance of seizing and then maintaining logistics hubs. From the outset, chance played an important role in this regard. On June 19, a major storm destroyed one of the two "mulberries," the temporary artificial harbors created by formidable concrete and steel jetties that the Allies had sunk offshore, thereby restricting the flow of supplies through the beachhead. That made the seizure of Cherbourg's port, already a key objective, even more essential and brought an enhanced sense of importance and urgency to the urban operations to seize it.[3] That the Germans devastated the port facilities before surrendering Cherbourg temporarily denied the Allies the benefits expected to accrue to them. The port did not become completely operational until August, almost two months after its capture. Robert Citino has enumerated the extent of German destruction: "Mines, sunken ships, demolitions, systematic destruction of the Gare Maritime (a combined railroad station and ocean-liner terminal that also controlled electricity and heat for the port), 20,000 cubic yards of masonry dumped into the harbor, destruction of the breakwaters: it was a particularly thorough job." A positive for the Allies was the taking of Saint-Lô, which facilitated Operation Cobra and led to the major operational success of the campaign as a whole. As Kingseed remarks, "The gateway to either Brittany or the heart of France now lay open" by the end of July. [1] Other observers agree. Champagne characterizes Saint-Lô as the "U.S. Army's key" to victory in Operation Overlord, the Allied fight for Normandy. [2]

Second was the difficulty of supplying such large operations and the critical importance of Cherbourg's port and Saint-Lô's road network in doing so. While the surviving mulberry was surprisingly effective, use of a permanent port allowed the Allies to stream in supplies and soldiers, leveraging their quantitative advantage in industrial mobilization and economic output to build up a massive presence that, once ashore, simply overwhelmed German defenses until and

again after the Ardennes counteroffensive. One Allied innovation that proved successful was the Red Ball Express, a hastily organized motorized transport operation that carried forward supplies arriving in ports, augmenting the French railway system. [3] James Holland has rightly observed with respect to the campaign as a whole, "The biggest challenge, it seemed, was getting these immense numbers of American troops and quantities of materiel south and into the open where they could manoeuvre and begin the giant wheel towards the east."

Cherbourg and Saint-Lô were crucial to this larger design, and urban operations were in turn essential to their seizure—which leads to the third lesson learned, the importance of urban operations aimed at seizing towns and cities for broader operational advantage. The urban operations for Cherbourg and Saint-Lô from June to July 1944 were of a unique nature, comprising isolation of built-up areas followed by tenacious combined-arms assault. These urban engagements yielded strategic and ultimately decisive implications, but they were in themselves tactical and cost the lives of many soldiers like Maj. Thomas Howie, remembered by his grandnephew as "the manifestation of a generation of American youth that had come to liberate France, at tremendous cost."

In the context of a total war, Allied leaders of the Normandy campaign identified three urban targets the capture of which would potentially make the greatest contributions—the port at Cherbourg, the vital transportation hub at Saint-Lô, and Caen, the provincial capital. To seize the first two objectives, Allied forces proceeded along broad fronts and used operational maneuver to isolate the towns, U.S. VII Corps surrounding Cherbourg in June and U.S. XIX Corps isolating Saint-Lô in July. Once operational maneuver had achieved these objectives, Allied forces employed combined arms, especially artillery and airpower, to reduce the cities' strongest defenses. Airpower was especially effective thanks to the air supremacy the Allies had achieved early in the Normandy campaign. Once the towns had been isolated and reduced, Allied forces commenced tactical urban operations to clear them out and eliminate any remaining resistance.

Cherbourg and Saint-Lô, then, demonstrate the hybrid nature of urban operations, in that both objectives were merely means to an end in the larger contexts of the Normandy campaign and beyond that a global conflagration. Locally, their investment and seizure were innovative in their sequencing of operational maneuver to isolate, combined arms to reduce, and tactical street-by-street and house-by-house fighting to seize important objectives. In the end, both Cherbourg and Saint-Lô make clear that while urban operations necessarily must be fought, at least finally, at the tactical level, they are most successful when part of a broader operational vision in which they directly promote larger strategic aims.

NOTES

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2. On planning the invasion, see Stephen C. Kepher, COSSAC: Lt. Gen. Sir Frederick Morgan and the Genesis of Operation Overlord (Annapolis, MD: Naval Institute Press, 2020).

3. Alan Axelrod, 100 Turning Points in Military History: The Critical Decisions, Key Events, and Breakthrough Inventions and Discoveries That Shaped Warfare around the World (Guilford, CT: Lyons, 2019), 288.

4. On Operation Neptune, see Craig L. Symonds, Neptune: The Allied Invasion of Europe and the D-Day Landings (Oxford, UK: Oxford University Press, 2014). On Operation Overlord, see Max Hastings, Overlord: D-Day and the Battle for Normandy (New York: Simon & Schuster, 1984).

5. John T. Kuehn with David W. Holden, The 100 Worst Military Disasters in History (Santa Barbara, CA: ABC-CLIO, 2020), 310.

6. Ernest O. Hauser, "Resurrection of a City," Saturday Evening Post, October 21, 1944, 26.

7. Maurice Matloff, ed., American Military History, vol. 2, 1902–1996 (Conshohocken, PA: Combined Books), 146.

8. On the Falaise Pocket, see James Holland, Normandy '44: D-Day and the Epic 77-Day Battle for France (New York: Atlantic Monthly, 2019), 528–36. For a fuller account, see Martin Blumenson, The Battle of the Generals: The Untold Story of the Falaise Pocket—The Campaign That Should Have Won World War II (New York: William Morrow, 1993).

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14. Daniel R. Champagne, "Battle of the Hedgerows," Military History 23, no. 2 (April 2006): 25.

15. Weinberg, World at Arms, 681. See Joshua Levine, Operation Fortitude: The Story of the Spies and the Spy Operation That Saved D-Day (Guilford, CT: Lyons, 2012).

16. U.S. Army Center of Military History, Utah Beach to Cherbourg, 151.

17. Champagne, “Battle of the Hedgerows,” 26.

18. Weinberg, World at Arms, 689–90.

19. Champagne, “Battle of the Hedgerows,” 23.

20. Stephen A. Bourque, Beyond the Beach: The Allied War against France (Annapolis, MD: Naval Institute Press, 2018), 242.

21. U.S. Army Center of Military History, Utah Beach to Cherbourg, 171–72.

22. Citino, Wehrmacht’s Last Stand, 240.

23. Holland, Normandy ’44, 434, 469.

24. U.S. Army Center of Military History, Utah Beach to Cherbourg, app. D.

25. Citino, Wehrmacht’s Last Stand, 238.

26. Holland, Normandy ’44, 306.

27. U.S. Army Center of Military History, Utah Beach to Cherbourg, 159.

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29. On assassination attempts on Hitler, see Don Allen Gregory, After Valkyrie: Military and Civilian Consequences of the Attempt to Assassinate Hitler (Jefferson, NC: McFarland, 2019); Theodore S. Hamerow, On the Road to the Wolf’s Lair: German Resistance to Hitler (Cambridge, MA: Belknap Press of Harvard University Press, 1997); and Herbert Molloy Mason, To Kill the Devil: The Attempts on the Life of Adolph Hitler (New York: W. W. Norton, 1978).

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33. Bourque, 239.

34. Matloff, American Military History, 2:145.

35. U.S. Army Center of Military History, Utah Beach to Cherbourg, 197–99. For detailed battle casualties, see app. B.

36. Cole C. Kingseed, “World War II Almanac: Operation Cobra—Prelude to Breakout,” Military Review 74, no. 7 (July 1994): 65.

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40. Citino, Wehrmacht's Last Stand, 242.

41. Kingseed, "Operation Cobra," 66.

42. Champagne, "Battle of the Hedgerows," 22.

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WARSAW UPRISING

Map redrawn from Robert Forczyk, Warsaw 1944: Poland's Bid for Freedom (Oxford, UK: Osprey, 2009), 25

KEITH D. DICKSON

4

THE WARSAW UPRISING, AUGUST TO OCTOBER 1944

WITH THE ESTABLISHMENT of the Polish state in the aftermath of World War I, the city of Warsaw assumed the role as the political, intellectual, and cultural center of the nation, as well as of Polish national identity. Warsaw was a symbol of Polish, and indeed Western, independence as it faced a Soviet onslaught in 1920 intended to bring about the collapse of the European postwar capitalist system. Standing alone, the Poles conducted an adept counterattack outside of the city that threw back Soviet forces in one of the most decisive battles of the twentieth century, ending the threat of Bolshevik revolution reaching the heart of Europe. Warsaw, as a city standing at the gates of Europe, became thus both a symbol of Polish independence and a symbol of resistance. It was inevitable that Warsaw would play these roles again as the changing tides of war in 1944 put the city in the global spotlight. The Poles again would have the opportunity to strike for freedom and independence, this time by opening a battle within the city itself.

POLAND'S AGONY: OCCUPATION AND RESISTANCE, 1939–1943

In the opening days of World War II in Europe, German planners designated Warsaw as both a decisive point in the campaign and a strategic objective. Warsaw could not be allowed to become a fortress city—a symbol of national defense—that could draw together the shattered elements of the Polish army to resist to the end. As a result, Warsaw was the first city in the war to be attacked by air. This new capability proved highly effective in hastening Poland's capitulation. Nearly six hundred tons of bombs fell on the city (at this time an unimaginable amount of explosives), intended to terrorize and shatter morale. Tens of thousands of people, almost all civilian noncombatants, were killed, and a large part of the city center was destroyed.[1] Polish diplomats in France and Britain formed a government in exile in France under the leadership of Władysław Sikorski, who became prime minister and commander in chief. It would seek to restore the independence of Poland, create a new army, and finally, organize and direct an internal resistance movement.

The Nazis dismembered Poland, annexing a large part of its western territory bordering Germany, renaming it "Wartheland." The center of the former Polish

state, which included Warsaw, was termed the "General Government" and was considered a colony of the Reich. The remainder of Poland, east of the Bug River, was occupied by the Soviet Union (USSR) as part of a prewar agreement with Hitler. For the General Government administration, established in Krakow under the control of a Nazi ideologue, the former capital served a number of purposes. First, it was a showcase for the implementation of the new Nazi order in Europe—the 11 million Poles who lived under control of the General Government were to become slaves, to provide food and labor for the Reich. Warsaw served as an entryway for German settlers arriving to repopulate the territory as part of the concept of Lebensraum. After the adoption of the Final Solution, it became a collection point for Jews marked for extermination. Finally, it was to be the staging base from which Germany would launch its attack against the USSR.[2]

With the invasion of the USSR in June 1941, German forces quickly gained control of all prewar Poland. The former Soviet zone was now under the control of Heinrich Himmler, who quickly engaged in the wholesale slaughter of Jews as part of a "Germanization of the Land" campaign.[3] As Nazi atrocities proliferated, resistance grew. Despite the relentless Nazi efforts to eliminate all traces of Polish culture and identity, nationalism remained strong. Warsaw, in fact, became the headquarters of the underground in Poland, acting as a shadow government, sustaining Polish culture, operating secret schools from secondary to university level, supporting passive and active resistance, directing clandestine publishing, and preparing Poland for eventual liberation. It was subordinate to the Polish government in exile and followed the orders of the commander in chief. By 1942 the underground had developed its own armed force, the Polish Home Army—Armia Krajowa (AK). For security reasons, most of the AK's activities were directed from Warsaw. These were largely sabotage operations against rail lines intended to slow down the transit of German troops and supplies to and from the Eastern Front. Members of the AK employed in factories making war materiel diverted supplies and components for explosives to the underground. Groups of young men organized into cells painted walls throughout the city with anti-Nazi symbols.

The British Special Operations Executive (SOE), established to encourage resistance in Nazi-occupied Europe, furnished only a very limited amount of training and supplies, but the Polish agents who arrived did provide significant boosts to morale by maintaining the vital connection to the government in exile. The AK had little understanding of the ability of the Americans and British to support a general uprising with air-delivered supplies. Despite repeated efforts of the Polish government in exile to increase Allied air deliveries to the AK, support remained limited. When Gen. Stefan Rowecki, the original leader of the AK, was betrayed to the Nazis in 1943, he was replaced by Gen. Tadeusz Bór-Komorowski (Bór). In addition to problems with organization, training, supply, and security, Bór continually struggled to build unity of purpose within the conglomerate of armed groups that composed the AK. Bór sought to prepare the AK for the future, a time when a general uprising could be initiated to drive out

the Germans. In preparation for this eventuality, the AK focused on small-scale raids and ambushes, sabotage, and tactical training, eventually producing six hundred officers and highly cohesive squads of fighters that could be organized into companies. For operational security reasons, pseudonyms were used, and a cell structure, in which only the members of a cell were known to each other, prevented any penetration into the organization. By July 1944 the AK had 860 platoons with over 40,000 active fighters. Another 6,000—largely teenage girls and younger boys—served as auxiliaries, sappers, communicators, and security personnel.

The Warsaw Ghetto was established in 1940, and the systematic maltreatment of its residents rose to a climax in 1942, by when hundreds of thousands of starving Jews were being loaded on trains bound for the death camps. The nearly 60,000 Jews remaining, clearly aware of their fate, began to organize a resistance. In April 1943, Jewish fighters surprised German soldiers entering the ghetto intending to round up the last survivors. For three weeks the Jews fought with everything they had until overwhelmed. The survivors were either killed immediately or sent off to the death camp at Treblinka. The entire area was razed, leaving no trace of Jewish existence in Warsaw. The meaning of this event was not lost on the Warsaw Poles outside the ghetto. Certainly, the Nazis believed the ethnic Poles were as expendable as the Jews; it was abundantly clear that once the Jews had been eliminated, the Poles would suffer the same fate.

NEW CONDITIONS ARISE: 1943–1944

As the tide of battle began to turn against the Germans in 1943, it became clearer that the Soviets would be approaching the prewar borders of Poland again, this time as liberators. The AK and other partisan groups began increasing their activities throughout the General Government region, leading to terrible reprisals against the Polish people. The main trouble for the Germans was in Warsaw, where they were plagued by assassinations and small-scale attacks. The Germans retaliated by random executions of people on the streets. Hans Frank, the governor of the General Government, declared that Warsaw was the "home to all disorder."

As the Red Army advanced the political-strategic landscape in Europe was being reshaped. The Polish government in exile was losing influence with the Western Allies as the United States and Britain sought further accommodation with the USSR, foreseeing that the Soviets would be able to dictate the conditions that would shape Eastern Europe. Stalin's postwar agenda began to emerge at the Teheran Conference. There the British and Americans agreed to a revised Soviet border with Poland, one based on the 1920 demarcation line between the Polish Republic and Bolshevik Russia in the aftermath of the Russo-Polish War. This line would cede about 52,000 square miles of eastern Polish territory to the USSR. The Polish government in exile was not consulted. Significantly at Teheran the date for the Overlord landings in France was set for May 1944 and Stalin agreed to conduct a major offensive to tie up German forces on the

Eastern Front once the Allied landings began. Thus, the Poles were unknowingly placed in a disadvantageous position, heavily dependent on the goodwill and beneficence of the Soviet Union as it initiated its advance into central Europe.

To compound the problem for the Poles, Sikorski was killed in a plane crash in July 1943. His replacement as prime minister was Stanisław Mikołajczyk, and Gen. Kazimierz Sosnkowski became commander in chief. The new leaders scrambled to provide guidance to Bór and the AK regarding how the underground was to deal with the anticipated advance of Soviet forces. Bór asked for guidance also on the timing and purpose of the long-planned general uprising. The political stakes were enormous. If the Soviets advanced into prewar Polish territory as allies, the AK and the underground would act as representatives of the legitimate Polish state until the arrival of the government in exile. If, however, the Soviets did not recognize the legitimacy of the government in exile, the AK and underground would be exposed to destruction. The USSR had already broken diplomatic relations with the government in exile, earlier in 1943, over Soviet involvement in the massacre of tens of thousands of Polish officers at Katyń in 1939 and was unlikely to reestablish them now that the USSR had the upper hand. Instead, Stalin was sending his own pro-Soviet Polish government and Polish army to supplant any pro-Western Polish elements that still remained active.

The changing political-strategic conditions made Warsaw even more important to the Poles if they were to be restored as a nation. Since 1939 Warsaw had been both the symbolic capital of the Polish government in exile and the practical, functioning capital of the underground, the shadow government operating in conjunction with the government in exile and providing continuity to the rest of the country. With its one million people, moreover, Warsaw was not only a symbol but a center of active resistance, an example for emulation—which made it vulnerable to extreme reactions from the Germans. With the increasingly distant relationship of the government in exile with Britain and the United States, it became clear that if any significant political or military actions were to be taken toward an outcome for a free and independent Polish state, they would have to originate in Warsaw.

By January 1944, the Red Army was crossing the prewar Polish–Soviet boundary. Six months later, as agreed, the Soviets launched in conjunction with the Allied landings in Normandy one of the most devastating combined-arms offensives in military history. Operation Bagration began on June 23, 1944, with a concentration of about 2.5 million men organized into two hundred divisions supported by a combined total of six thousand tanks and assault guns in a massive offensive that overwhelmed the brittle defenses of Army Group Center, which had responsibility for a roughly six-hundred-mile front covering central Belorussia. Of Army Group Center's thirty-three divisions, twenty-five ceased to exist, along with over 350,000 German troops . By the end of July the Soviets had advanced more than four hundred miles and had cleared Belorussia.

In late July the Soviet 2nd Tank Army reached Wolomin and Radzymin, only

nine miles east of Warsaw, and the 8th Guards Army established a small bridgehead over the Vistula south of Warsaw at Magnuszew. Disorganized and desperate German survivors of the debacle streamed across the two main bridges over the Vistula into the city, seeking safety farther west. A public order from the German administrators in Warsaw for 100,000 Polish citizens to assemble and build antitank ditches on the outskirts was ignored.

The administrators themselves began to evacuate on July 25, and it appeared from the mass exodus the citizens of Warsaw were witnessing, as well as the reports in the Western press of the scale of the Soviet victory, that a total German collapse was in the making. Radio Moscow contributed to the belief that the city was on the verge of liberation. Polishlanguage broadcasts urged the people of Warsaw to "assail the enemy" and "support the Red Army in the task of crossing the river Vistula."[1]

THE POLISH RESISTANCE TAKES ACTION

The rapidity of the German collapse forced Bór to make a fateful decision. The AK leadership was divided on whether to initiate the general uprising. The AK chief of staff, Gen. Antoni Chruściel (Monter), designated as the military commander in Warsaw, had conducted a personal bicycle reconnaissance, during which he found much of the eastern suburbs free of German troops and heard from residents that Soviet tanks had been sighted on the road. German troops east of Warsaw had formed a semicircular twenty-kilometer-long defensive line. Soviet military reconnaissance units were already probing these defenses. It seemed to be only a matter of time before the Soviets would cross the Vistula in force. The strength of German forces in the city itself was hard to determine, but the main defenders were believed to be police and security units occupying static positions in various stages of organization and reliability. This was hardly the best information on which to base such an important decision, but it was all that was available to the leadership at this point, and it helped make up Bór's mind.[11]

In earlier communications with Bór the government in exile in London had been receptive to the timing of the uprising, believing that Prime Minister Mikołajczyk would use the uprising as leverage to press the British prime minister, Winston Churchill, and the American president, Franklin D. Roosevelt, to call on Stalin to recognize the AK and the underground as representing the legitimate government of Poland. Also, it appeared that the German army was now vulnerable to defeat in detail by the AK, leaving the Poles in administrative control of their national capital and forestall a Soviet occupation—important leverage for establishing their political legitimacy. Also, Bór was afraid that Stalin would force Mikołajczyk to compromise Poland's future if the Soviets took Warsaw without the AK having control of the city.[12]

On the evening of July 31, Bór issued the order for the uprising, codenamed Burza (Storm), to commence twenty-four hours from receipt. He informed deputy premier Jan Stanisław Jankowski in London of the decision.[13]

A few days previously, Jankowski, asked about the timing of the uprising, had reportedly given an impassioned response that captured the thoughts and feelings of every member of the AK in Warsaw who had been informed of the order for action the following day:

The fights in Warsaw will begin, if we want it or not. In a day, two or three Warsaw will become the first fighting line. I don't know, maybe the Germans retreat immediately, maybe there will be street fights, like in Stalingrad. Can you imagine that our youth, panting with desire for revenge, trained by us for years, prepared for that moment, with guns at disposal, would passively look or allow the Germans to be taken without resistance to the Reich? If we don't give the signal to fight, the communists might forestall us, and then people will really believe that we wanted to stand still with weapons down.[1]

THE PLAN OF BATTLE

The general concept of the operation was to use surprise to attack and reduce the German garrison, estimated to be about 16,000 troops. In addition, key communication and command-and-control centers were to be captured to isolate the city and delay any reinforcements. The offensive was intended to last three to four days, which was believed to be enough time for the Soviets to advance and enter the capital. German resistance would then be eliminated.[1]

The AK had about 48,000 fighters spread throughout the eight districts of the city. Each district had between three and twelve battalions of anywhere from two hundred to six hundred fighters each. In addition, there were any number of loosely organized armed groups that were not under direction of the AK but joined in the fighting. The AK battalions were poorly armed and had limited ammunition; many fighters had no weapons at all but nevertheless went into battle with homemade grenades and improvised hand-thrown incendiaries known as Molotov cocktails. Because of the necessarily clandestine nature of the AK, battalions prior to the uprising had little interaction; as a result, command and control was extremely difficult and often nonexistent. Units therefore most often fought at the squad level, where the cell structure had built trust and high morale among the fighters.[1]

But even as Bór's order was being relayed throughout the city, the operational picture that had determined the AK's plan to capture the city was already changing dramatically. The German army once again displayed its remarkable capacity to rally, reorganize, and form effective combat forces even in the midst of catastrophe. By July 31 elements of four panzer divisions, including the Hermann Göring Panzer Division, transferred from Italy, struck the Soviet 2nd Tank Army at Radzymin and brought the Soviets to a stop. Soviet forces had suffered heavy losses in tanks and troops forcing them to establish a defensive line and wait for resupply.[1] By August 10 the battle line had stabilized (though fighting was to continue northeast of the city through October).

For the AK, this meant that there would be no Soviet support for their battle in Warsaw. Actually, the Soviets had no intention of ever supporting the AK.

Marshal K. K. Rokossovsky, the commander of the 1st Belorussian Front had presented a plan for a new offensive to surround Warsaw, but Stalin had other intentions. As Soviet forces began to culminate, on August 1, he prohibited aircraft from flying over Warsaw. On the 2nd, he issued an order that any AK fighters encountered should be assumed to be pro-German and disarmed. In fact, as the struggle for Warsaw grew in intensity and the AK demonstrated its ability to hold out against the Germans, Soviet forces on the outskirts of the city grew increasingly passive. It appeared that Stalin was considering his options, taking a "wait and see" approach. On August 13, the TASS news agency in Moscow issued a statement blaming "the events in Warsaw" on the government in exile in London. Time was on Stalin's side.[1]

CHANGING CONDITIONS UNDERMINE THE BATTLE PLAN

As the German defenses east of the Vistula stabilized and their units rallied, Warsaw became an important center for resupplying them; any threat to that supply line (and line of retreat) had to be eliminated. In fact, just a few days before the beginning of the uprising Hitler had declared Warsaw a fortress city, to be held at all costs. The AK would soon be facing determined German resistance. Meanwhile, many AK units did not receive Bór's order until the morning, resulting in delays in assembly and coordination. Many units never reached their designated assembly points. By the time designated for the attacks to begin, less than half of the fighters had been assembled. Within hours, Bór's general plan was invalid; the AK was launching an uncoordinated city-wide attack completely alone against an enemy that was far from defeated.

Meantime, following the outlined plan of attack, General Monter issued orders for the capture of key decisive points in and around the city: airfields, bridges, railway stations, enemy outposts, and communication centers. The bridges and airfields were considered especially important. The bridges would allow Soviet forces to enter the city rapidly, and Allied aircraft could use the airfields to deliver supplies and reinforcements. Nothing, though, was centrally directed—the initial effort was later described as "a kind of exhilarating chaos," with reckless courage and enthusiasm overwhelming tactical or operational purposes.[1] All attacks against decisive points failed. The AK fighters lacked both the tactical skills and the weapons necessary to mount a coordinated combined-arms attack against a well-protected position. (The power station was captured, but by means of a long-planned deception operation; the AK maintained power throughout the city for the remainder of the siege.) As coordination between the districts collapsed, barricades sprang up within them; each district became an isolated island fighting for survival. The German tanks in the city were few but proved decisive early on, stopping uncoordinated assaults and inflicting heavy casualties. Civilians, taken completely by surprise by the sudden initiation of combat, soon came out to support the AK fighters, building barricades, constructing interconnected fighting positions between buildings, and digging antitank ditches in the streets.

The account of one fighter captures conflicting emotions and reactions that

many undoubtedly felt as they experienced combat firsthand: "The Warsaw Uprising is the most important and unforgettable period of my life. In that time I experienced deep joy, happiness and pride seeing our victories liberate a large part of Warsaw, Polish flags hanging from windows, and our people free after years of occupation and debasement. However, there were also frightful days, days on which my comrades in battle perished, and I could witness the tragic plight of the city's civilians, starving in cellars or buried under the rubble of their shelled homes."[2]

The AK made its greatest gains in the center of the city, capturing by the end of the first day the tallest building in Warsaw, the Prudential Insurance Company building, from which they suspended a giant Polish national flag. This area, known as the Old Town, with its narrow medieval street layout and tall buildings, was perfectly suited for barricades and allowed lightly armed fighters to move rapidly from point to point. A captured warehouse yielded enormous stocks of food and a cache of German uniforms; a large number of AK fighters wore these uniforms, with red and white armbands to distinguish themselves from the enemy. Over the first few days a stalemate developed that favored the AK, allowing fighters and civilians to organize defenses. By August 4 German troops were largely on the defensive, and the AK had expanded its control to encompass about thirty square miles of the city, including Żoliborz, Old Town, Śródmieście, and much of Wola.

Every night these areas became increasingly more defensible, as houses were fortified along with vehicle barricades and other obstacles. However, these efforts were accomplished in isolation , and thus there was no cohesive coordinated defense.[21] As one fighter recalled, the situation for the AK became increasingly difficult: "The Uprising had begun in almost every quarter of the city but soon the Germans managed to isolate pockets of resistance by controlling major communication lines cutting across the town in both north–south and east–west directions. After a few days the city had been divided into several sectors and the insurgents could communicate between themselves either through underground sewers or, curiously enough, radio signals sent to London and back."[22]

The problem was compounded by Bór himself. He established his headquarters in a furniture factory in the Wola district next to an SS police unit's barracks, leading to a major battle from which Bór and his staff barely escaped. In the course of this fight the radio set Bór used to communicate with London was damaged, and thus the Allies and the government in exile were unaware that the uprising had begun. Nor did Bór have radio communication with AK units in the city, largely because he had never used a radio as a tactical commander. In addition, he had no means of communicating with AK units outside of the city and thus had little effect on the course of the battle. General Monter, more centrally located in the Victoria Hotel, became the commander by default.[23]

Bór was able to reestablish communications with London, and by August 3 the Allies were aware of the battle. He reported that the morale of the soldiers was "fantastic" and that "national flags fly over the places taken over.… We

fight effectively against heavy tanks. We have destroyed or disarmed a number of them."[2] Bór followed up his somewhat inaccurate and embellished report with a request for immediate support in the form of aerial resupply drops. The government in exile had no aircraft under its command and had to rely on British air assets in Italy. Arranging any type of air mission was difficult due to the distances involved and weather; the Soviets by habit refused to allow Allied aircraft to use their airbases and so only a limited amount of supplies could be dropped. Additional problems hampered the resupply effort: the Germans had total air superiority over the city (mostly because the Soviet air force purposely abandoned the skies over Warsaw to the Germans); they had established a heavy air-defense ring, making any flight over the city dangerous; and resupply bundles had to be dropped with few or no ground markings for guidance. For every ton of supplies dropped over Warsaw, one Allied plane and its crew were lost. About half of the supply drops landed in AK-controlled parts of the city, providing food, ammunition, light and heavy weapons, and plastic explosives. But the supplies dropped were inadequate to sustain a fighting force for more than a few hours.[2]

THE AK FIGHTS ALONE

Throughout the battle, the British and Americans appealed to Stalin to provide airdrops to the Poles. Although Stalin agreed to assist, he delayed taking action as long as possible. Only on September 10 did Soviet aircraft drop supplies to the AK but dropped them indiscriminately over the city at night without parachutes, so the contents of the containers were usually destroyed on impact. A week later, over one hundred U.S. aircraft dropped 1,330 containers, but only about four hundred were recovered—far too few to make any difference in the outcome.[2]

In addition, once the uprising began Stalin ordered that no Soviet ground forces were to advance beyond the Vistula and offered nothing more than symbolic support or perfunctory action (like the air drops) on behalf of the beleaguered AK, believing correctly that these forces would eventually be a threat to the Red Army and the Polish communist government he intended to establish. Without Soviet support, the battle for Warsaw could not be sustained, and in late 1944, sensing decisive victory, Stalin was willing to bring the Grand Alliance to the breaking point, sacrificing hundreds of thousands of lives in the doomed city to achieve his aim of controlling Central Europe after the war.[2]

THE GERMAN HIGH COMMAND RESPONDS

Hitler's reaction to the uprising led him first to order the total destruction of the city through air bombardment, but the Luftwaffe was unable to comply for lack of fuel. Hitler could not rely on the 9th Army to destroy the city, as it was in the process of reorganizing and reconstituting in the aftermath of the Operation Bagration offensive, while also engaged in the counteroffensive at Radzymin. He could, however, rely on Reichsführer Heinrich Himmler and the SS to follow his explicit orders, not only to defeat the uprising but to annihi-

late the Poles and bring about the total physical destruction of the city itself. Within the first week of the uprising, Himmler had organized an ad hoc combat group under the command of an experienced SS antipartisan commander, Gen. Erich von dem Bach. This unit, designated Korpsgruppe Bach, was built around two SS brigades composed of German ex-convicts, concentration-camp inmates, Ukrainian volunteers, and a few regular SS troops. One regiment had been engaged in antipartisan operations in Russia that had involved the merciless slaughter of anyone suspected of partisan activity. Other attached units included a Cossack battalion of former Soviet prisoners of war and several police and guard units. Discipline understandably was poor in these largely non-German SS regiments, and once unleashed on the city they would wreak their own brands of terror. Von dem Bach had a battalion from the Hermann Göring Panzer Division to augment his SS brigades. Over time, regular Waffen-SS and Wehrmacht combat units and support assets would be added as reinforcements, including police, engineers, assault guns, and heavy artillery, including 600-mm heavy mortars.[2]

THE GERMAN OFFENSIVE

As the units of Korpsgruppe Bach began to reach Warsaw, along with the heavy tanks of the Hermann Göring battalion, the Germans seized the initiative. They arrived with a specific order from Hitler endorsed by the new commander of the battle for Warsaw, Himmler, that every citizen of Warsaw was to be killed and the city leveled. The attacks began on August 5 and continued the following day. The intent was a two-pronged attack to crush resistance along the main streets of the city as far as the two main bridges over the Vistula, thereby clearing a route for reinforcements to reach German forces defending east of the river. Two regiments would attack into Ochota from the south to reach Aleje Jerozolimske and from there the Poniatowski Bridge, while a Kampfgruppe, combat group, of SS security and police units moved east down Wolska, Chłodna, and Elektoralna Streets to secure the Kierbedź Bridge. The attack was poorly coordinated but executed against weak resistance, and what occurred along Wolska was the most monstrous act of mass murder in the European theater. In just two days about 40,000 people—men, women, children—were systematically rounded up and killed. There was no military purpose—any consideration of that was lost almost immediately. The larger purpose it did serve was contributing to the racial cleansing of Europe. The other regiments, moving north into Ochota, made little headway, preferring instead to rape and pillage at will. These acts of mindless, inhuman cruelty only galvanized the people: everyone now became a fighter, in a battle not for the future of Poland but for personal survival.[2]

The advance, barbaric as it was, cleared a narrow corridor into the center of the city, forcing AK units to withdraw. Movement for German units was still precarious, as troops and vehicles were subjected to random ambushes. Von dem Bach, arriving to take personal command, put an end to the terrible slaughter for the time being and tried to focus the units on military tasks, recognizing that a much more organized assault was needed to reduce AK defenses. Shortly

thereafter, von dem Bach convinced Himmler to rescind his order, arguing that military necessity required forces to fight armed resistance, not commit wholesale slaughter. The Ukrainians, who made up a large number of the ad hoc SS units sent into the initial assault, were so ill-disciplined and dangerous to not only the Poles but the Germans as well that they were moved out of the city to Kampinos Forest near Żoliborz, where the AK later attacked and destroyed them. With both the Wola and Ochota districts under German control, the focus of the offensive was now the Old Town. The AK units, with little central direction, fought costly and often pointless battles that progressively weakened combat strength and supplies.

German forces, largely troops with little or no real combat experience and lacking tactically competent leaders, tended to launch the same types of attacks over and over, suffering casualties but continuing to repeat the same poor tactics, which allowed the AK defenders to anticipate and counter German actions. Even with their often clumsy attacks, the Germans had the advantage of air strikes and the support of artillery and self-propelled assault guns designed for urban fighting. Tanks and assault guns worked in conjunction with infantry and engineers to reduce barricades and demolish houses that had been converted into strongpoints. It was a battle for yards, as the AK would meet every attack with sniper fire, Molotov cocktails, hand grenades, and small-arms fire. At times limited AK counterattacks drove back the Germans and captured weapons and ammunition. If fighters were in danger of being overrun, tunnels or sewers would provide them an escape to the next defensive position. Civilians huddled in cellars were in constant danger of a collapse of their shelter from a direct hit on the building above. Food and water became scarce; sanitation was worse, with bodies collecting in the streets and open areas. The heat was stifling. At night, fighters and civilians rebuilt barricades, dug tunnels, and passed messages.

A DESPERATE DEFENSE

As German reinforcements arrived, it became clear to the remaining four thousand AK fighters and the nearly 40,000 civilians trapped in the Old Town that for them, no help was arriving. Having suffered heavy casualties, the Germans seemed content to shatter the Old Town with aerial attacks and artillery bombardment as they prepared for a coordinated attack all along its perimeter. In the city center, the Mokotów quarter, and the suburb of Czerniaków, AK units numbered about 8,200 fighters in total, but these units were isolated both from each other and AK units and headquarters elsewhere in Old Town; Monter communicated with them via runners who traveled through the sewer system. The German forces were not large enough to isolate the Old Town and clear these pockets of resistance. In the last week of August, however, the Germans launched a series of concentric attacks against the AK's sixteen defensive strongpoints, which the Poles had located to cover key buildings, main streets, and city squares to prevent the Germans from concentrating forces for an assault.

The first attacks came from the south, and battles raged at three strongpoints: the Fiat factory, Jan Boży Hospital, and the PWPW (the banknote printing

building), a multistory concrete structure converted into a fortress. Although lightly defended, it was a significant obstacle that took more than four days of room-to-room fighting to capture. The Fiat factory held out, and the attacks shifted to the east, where they failed to make any progress. Again the focus of the attack shifted, this time to the north with the objective of taking Teatralny Square. By August 30 it was clear that the perimeter defenses could not be held much longer. Bór and his staff had evacuated Old Town on August 25 and relocated to the city center, leaving the defenders orders to fight a rear-guard action and assemble at the sewer evacuation point. AK units struck back at German units advancing south from the PWPW building and at Teatralny Square to buy time for other units moving toward the assembly points under heavy artillery and air bombardment. The fall of the Fiat factory signaled the collapse of the defense.

About five thousand AK fighters fell during the last week of August. The walking wounded and survivors evacuated through the sewers, leaving behind tens of thousands of civilians, many seriously wounded, who had spent weeks crowded in dark basements with little food or water. They were now at the mercy of the SS antipartisan troops, many of whom had participated in the slaughter of civilians in Wola. Orders from Berlin, however, were different this time. Those who were deemed capable of working were to be moved to Germany as forced labor; the infirm were to be summarily shot. Others were sent to concentration camps. Many groups of civilians fleeing the Old Town for safety elsewhere were killed. For the next two months a tide of human misery streamed out of the city to an unknown fate.[3]

Despite their defeat, the AK defenders of the Old Town gained important international stature by their heroic stand. On August 29, both the British and American governments issued declarations recognizing AK fighters as legitimate combatants and therefore subject to the laws of war under the Geneva Convention. This declaration created a dilemma for Bór and the AK. Morale was collapsing, and civilians were in increasingly desperate straits; until then AK fighters had had no prospect of survival—their only choice had been to fight to the end. Now conferred the status of legitimate combatants, Bór's fighters had an option of surrendering—if the Germans would honor that status.

THE SOVIETS ADVANCE—FINALLY

Between September 10 and 15, Soviet forces, led by the 1st Polish Army (volunteers from Soviet-occupied Polish territory) pushed German defenders out of the Praga district on the east side of the Vistula. That gave the Soviets access to the two main bridges into Warsaw, but the Germans, after withdrawing as many troops as possible, destroyed them. By including his pro-Soviet Polish forces in the attack Stalin was signaling that a new, redefined Soviet-Polish alliance existed, asserting that the AK and the Polish government in exile no longer had claims to legitimacy as representatives of the Polish nation. After taking Praga, Soviet forces made no further efforts to reach Warsaw.[31]

Nevertheless, the fact that the Soviets were in Praga put additional pressure on von dem Bach to bring the resistance in Warsaw to an end. The 9th Army needed access to the west bank of the river to counter any crossing attempt, and the AK in Czerniaków stood in the way. The AK held Czerniaków in the desperate hope that it could serve as a bridgehead for Soviet forces to link up with them. The battalion defending it had been reinforced by the survivors of the Old Town battle, bringing the total number of fighters to about 1,100. But they were short of supplies, especially ammunition. The Germans, determined to clear the area as quickly as possible, and concentrated heavy artillery and mortar fire (including the huge 600-mm mortar) to suppress the defenses. AK attempts to contact Rokossovsky directly to coordinate a defense were met with silence. It was a one-sided battle. Heavily outnumbered and under constant bombardment, the defenders were pushed to the banks of the river. Many escaped through the sewers, others attempted to swim the river. The 1st Polish Army attempted several battalion-level river crossings from the east bank, but the Germans easily repulsed them and inflicted heavy casualties. The last defenders of Czerniaków were eliminated on September 23, and the SS proceeded with their standard brutal reprisals and indiscriminate killings.

Von dem Bach now received significant support from the 9th Army. There was rising concern that the continued passivity of the Soviets across the Vistula meant that the real battle was to come and the battle for Warsaw had to end in preparation for it. The 19th Panzer Division, a hardened, tactically proficient, and well-led combat unit, was detached to support von dem Bach's exhausted and dwindling units. Combat detachments from other, similarly experienced divisions were added as well, and the fate of the AK was sealed.[32]

THE LAST BATTLES

The two remaining holdout districts, Mokotów and Żoliborz, to the south and north of the city center, respectively, were systematically reduced. Combined-arms attacks of units of the 19th Panzer Division and a battalion of the Herman Göring Division overwhelmed the defenders of Mokotów in three days, September 24 to 27. On the 29th, these units moved against Żoliborz, pressing the outnumbered and outgunned defenders into a one-kilometer enclave. The next day, Bór authorized the AK commander to surrender. Although some AK fighters (including a group of Jewish fighters) refused to surrender and escaped into the woods to the north, Lt. Col. Mieczyslaw Niedzielski ("Colonel Żywiciel") with about 1,800 men surrendered. They were treated as prisoners of war. Unlike the barbarous SS antipartisan units, the soldiers of the 19th Panzer Division respected the laws of war.

The remaining holdout was the city center, three square miles just north and southeast of the central railway station. The AK held the main post office, the Prudential Building—the tallest building in Warsaw where the Polish flag still flew—and the PKO bank building. In a section south of the principal east–west street, Aleje Jerozolimskie, was Bór's headquarters. A barricade across the street allowed safe access to the two sections.

Between September 28 and 30 negotiations for an orderly surrender were held. On the 30th, Bór was designated commander in chief by the government in exile, but it was an empty gesture. Bór saw little purpose in continuing with no chance of success. The sacrifice had been made for a new and free Poland. The AK could do no more. The Germans insisted that the entire civilian population would be removed from the city and assured the AK that the evacuees would be humanely treated. In addition, all fighters would be recognized as legitimate combatants and subject to protection under the laws of war. The agreement was finished on October 3. Bór led his fighters into honorable captivity as prisoners or war. General Monter took the salute from over 11,000 AK fighters, including 2,000 women who declared themselves combatants, marching in a column four abreast, still carrying weapons (which were formally surrendered before leaving the city). These were followed by 150,000 civilians who were processed out of the city and to face uncertain futures: for some, forced labor in Germany; for others, concentration camps; for still others, a wandering existence as refugees.

After the surrender, between October 1944 and January 1945, German forces systematically destroyed the remnants of the city on Hitler's express orders. There was no military necessity to do so; it was a demonstration of hatred of the Poles and revenge for their gallant defense of their capital and homeland. It was an act of cruel and heedless nihilism—every building of historical value, every monument, every church was reduced to rubble; libraries, archives, museums—the priceless collective cultural heritage of both Poland and Europe—were destroyed. When on January 17 the Soviets entered the ruins that had once been Warsaw, nothing remained to be occupied.[33]

THE COSTS OF THE BATTLE OF WARSAW

In the two months of fighting that constituted the Warsaw Uprising, German forces suffered devastating losses. According to General von dem Bach's calculations, 17,000 soldiers were killed or missing and about 9,000 were wounded. Entire units were wiped out. The intensity of the fighting is revealed in the average loss of 1,900 men per week, a far higher loss rate than that of German units in the Normandy campaign, itself some of the most intense sustained combat in the war. In addition, the AK could claim four tanks, two armored cars, a 75-mm artillery piece, twelve mortars, and four antiaircraft weapons captured. Four German aircraft were shot down, nearly one hundred tanks, assault guns, and armored cars were destroyed, and another two hundred combat vehicles were damaged. For the AK too the cost of the battle was severe. About 18,000 fighters were killed or missing and between 6,500 and 7,000 wounded. The German commander of Warsaw, Gen. Rainer Stahel, although largely isolated throughout the battle, had ample opportunity to assess events as they unfolded. In a classified after-action report, he indicated that the AK demonstrated good tactical skills and were repeatedly able to inflict high casualties on attacking units. Comparisons to the fighting in Stalingrad were made. After the surrender, Himmler admitted "that fight [against the AK] is the heaviest among those that we [have] conducted since the beginning of the war."[3]

Sadly, the human cost of noncombatants in the battle of Warsaw was staggering: an estimated 150,000 civilians died, many of them victims of horrific atrocities by SS antipartisan units, which in many ways hardly resembled military organizations. The over 250,000 survivors were to suffer continuously in various ways at the hands of the Germans until the end of the war. Urban fighting was enormously destructive. Nearly 25 percent of the prewar buildings in Warsaw were destroyed in intense street battles in which the Germans destroyed large sections of the city to clear out defenders.[3]

WAS THE UPRISING WORTH THE COST?

As the officers of the AK waited out the war in prisoner-of-war camps, there was among them a great deal of sober reflection: What had been the purpose? What were the consequences of failure? Had the great struggle been worth the cost? The officers of what had been the AK's Bureau of Information and Propaganda offered their own assessment of the uprising:

> From the military point of view, the uprising in Warsaw was supposed to capture the city and to support the Soviet operation in this section of the frontline. Politically, it was to demonstrate our anti-German attitude and our will to remain masters in our own country, with a certain hidden hostility toward Moscow's one-sided attempt at solving the Polish case. The development of the political situation after the uprising would result in the establishment of a base for the return of at least a part of the London government and in settling relations with Moscow on the foundation of the new contribution of struggling Poland to this war—the liberation of the country's capital with our own hands.[3]

Thus, the Uprising was about Polish patriots who sought to be the agents of their own liberation and, as a result, to reestablish Poland as a sovereign nation capable of shaping its own destiny in postwar Europe. The act of fighting itself was an exhilarating expression of Polish independence and freedom. Despite defeat and enormous cost, the sixty-three-day uprising solidified and exemplified the spirit of the Polish people, a spirit that could never be extinguished, a spirit that carried them to ultimate independence and freedom in 1991. Public-opinion polls indicate that the majority of Poles view the Warsaw Uprising of 1944 "as a deed inevitable and heroic."[3]

ASSESSMENT AND ANALYSIS

To achieve the larger strategic goal of restoring a free and sovereign Poland, the government in exile needed to be elevated to the status of a major Allied partner, one whose presence in postwar Europe would be viewed as essential to peace and security. Unfortunately, neither the British nor the Americans possessed the will or the foresight to align military operations with desired political outcomes. Beginning with the Teheran Conference, the Western Allies indicated that the Polish question was open to negotiation. Stalin, who clearly understood the operational-strategic role of the Soviet forces crashing into Eastern Europe, accepted their blandishments as they prepared for the opening of the long-awaited second front. Once Bagration was launched, no one was prepared

for its overwhelming strategic effect. The destruction of Army Group South was totally unexpected—it was both a catastrophic defeat for the Germans and a correspondingly spectacular opportunity for the Soviets. Stalin instantly recognized that the Soviet occupation of Poland represented an objective that Bolshevik strategists had sought since 1920: the subjugation of Poland under Soviet control as a springboard from which the worldwide socialist revolution would begin.

Poland became the crux of the conflict of the strategic interests of the USSR and of the Western Allies. Neither Britain nor the United States could afford to let Poland simply slip away into Soviet hands, yet in the middle of the climactic campaigns to defeat Nazi Germany, as Soviet forces approached the Vistula, they realized that their ability to influence Stalin to change his goals was very limited. The Grand Alliance was fragile, and as political-strategic issues came to overshadow military operations, relations within the alliance were continually stressed. In the months leading to the decision for opening a second front Roosevelt was hesitant to provoke Stalin for fear of losing a vital ally at a critical time in the war. Roosevelt believed that a good American-Soviet relationship was essential to the postwar order. Of more immediate concern for Roosevelt was ensuring that the Soviets assisted in the defeat of Japan. The Allies had to hold together long enough to achieve their mutual goal; after that, the future was uncertain. Churchill was willing to take a more blunt approach with Stalin, but Roosevelt refrained from backing him. The Polish government in exile had little influence with either Churchill or Roosevelt, who were reluctant to press Stalin on Poland's behalf, and its attempts to find a diplomatic rapprochement with the USSR on its own met outright rejection.

This is the background to the uprising. The idea of the uprising itself was the thin reed on which millions of Poles suffering under occupation placed their hopes. The popular idea was that the AK and the underground generally would bide their time, carefully preparing for the right moment to strike out against the Nazis. Plans were carefully assembled, and units were organized and as painstakingly trained as possible under the security conditions imposed on them. To the leadership, it seemed obvious that the focus of the resistance was the capital, Warsaw. For any uprising to succeed, Warsaw had to be liberated and defended as a symbol of the Poles' determination to reassert their sovereignty and independence. The government in exile believed that with Warsaw under its control it would have the bargaining power to make a political settlement with the Allies. Thus, everything depended on a rapid, coordinated, simultaneous, and decisive strike by the AK against a host of critical targets to seize and gain control of the city so that the diplomatic-strategic initiative would shift to the government in exile.

The leaders knew what conditions would have to exist to initiate the uprising. In practical planning terms, if the uprising was to achieve this goal the AK had first to address a series of very important factors:

Command and control. A combination of centralized control and decentralized

execution was critical. Internally, rapid and secure communication throughout the operation was essential. Externally, command nets had to link with relief forces.

Intelligence. Units in each administrative section of the city had to have detailed knowledge of the targets they were to attack and seize. Reconnaissance and rehearsals were essential, as well as procurement of special equipment and weapons needed to support the attack.

Simultaneity. The attacks on multiple targets had to be coordinated and sequenced to achieve maximum effect.

Security and surprise. Units had to assemble clandestinely, organize for combat undetected, and strike without warning. The only way some of the more heavily defended targets could be taken was through surprise.

Supply and support. Units had to have sufficient supplies of food, water, and ammunition to sustain heavy combat for seventy-two to ninety-six hours and also to be able to deliver these supplies to combat units. Casualties had to be evacuated and treated.

Phasing. As attacks succeeded, units would have to be able to shift rapidly from the offensive to the defensive to repulse counterattacks. The timing of the arrival of external relief forces once all objectives had been captured had to be established and coordinated.

Visibility. The world needed to know immediately of the uprising. Broadcasts to the Allies on the progress of the uprising and declarations of its goals were essential to building support and spurring intervention.

External support. Forces outside the city under AK authority should support the general attack by sealing off routes by which the enemy would send reinforcements. In addition, they would serve as an auxiliary, evacuating wounded, delivering supplies, and providing reinforcements and replacements.

Despite years of organization and preparation, the underground in June and July 1944 was unprepared for the rapidity of the German collapse in that part of the theater. In and around Warsaw itself the evolving tactical-operational situation quickly became far beyond its capability either to assess or to respond. The onrush of events and fragmentary information led the AK leadership to cobble together a general plan of action—based on the belief that the morale of the German garrison in Warsaw had collapsed and that its leadership was in disarray. If this was the case, it appeared, speed was of the essence: even an improvised plan if executed with determination and violence would succeed against a weak and disorganized enemy. In outline, the plan was to take the German garrison by surprise and over three to four days eliminate strongpoints, paralyze German communications, and capture approaches to the bridges over the Vistula to allow entry into the city by the presumably surging Soviet forces ready to mop up resistance in partnership and coordination with the AK.[3]

General Bór-Komorowski ordered the commencement of the uprising on the most tenuous information; he was led to act by his anxiety that the moment to strike, and with it any hopes for the political future of Poland, would pass forever. But in doing so Bór set the stage for his own defeat. Bór had failed to prepare in any category listed above and now launched an uncoordinated, poorly organized, and ineffective series of attacks that led to serious casualties and within seventy-two hours forced the AK into isolated defensive strongpoints with goals reduced to simple survival.

Once the initiative was lost, the only hopes the AK had lay in rapid resupply and reinforcement by air or the advance of Soviet forces. Unfortunately, the Western Allies too had been taken by surprise and had little means with which to react. Stalin, at first unimpressed with the actions in Warsaw, soon perceived that the uprising actually furthered his larger strategic goals at the expense of the Allies and the government in exile. Accordingly he responded with calculated inaction and delay, hampering the efforts to support the Poles. These open fractures within the Alliance doomed the uprising. As Bór admitted years later, "our mistake resided in the fact that according to our evaluation, for military reasons, Russia's aim of a quick defeat of the Germans would overbalance other reasons. It turned out differently."[3]

For reasons apparent from the above account, it can be argued that the uprising in Warsaw should have been crushed easily and gone down in history as a minor footnote. Instead it became an epic, historic event that surprised and inspired the world. Despite the fact that most of the AK's battalions were lightly armed (if at all) and minimally trained, it had significant psychological advantages. There were some battalions that were well armed and highly trained. Its fighters were organized into small fighting groups of extraordinary cohesion and morale. They were very young men and women whose enthusiasm in most cases made up for lack of tactical skills, which they learned by hard, terrifying, and painful experience. They were all volunteers and were generally well led by men they trusted. They knew the parts of the city they fought in and could move with ease day or night. They were fighting for a cause in which they deeply believed and often displayed selfless and reckless courage that inspired others even as the fight appeared increasingly hopeless. Enemies on the battlefield in many cases find these intangibles insurmountable. Time and again AK fighters occupied strongpoints and, although lacking heavy weapons like machine guns and mortars, held out for days against repeated assaults of better-armed attackers. Firepower alone was insufficient to defeat the AK fighters; they had to be driven out yard by yard, street by street. One AK fighter described their remarkable esprit de corps as a "strong feeling of citizen patriotic service and schoolmates, friendship solidarity," along with "determination, the feeling of service, so striking in many circumstances, friendship at arms, [which] are closely connected to formation of clandestine communities."

In contrast, the German SS units assembled on the fly to retake Warsaw had previously been engaged in antipartisan operations with no restraints on their

conduct. These units, largely made up of castoffs, criminals, and foreigners, suffered from poor cohesion and morale, had inexperienced leaders, and possessed little tactical skill, especially in urban fighting. Their attacks were predictable and often were easily repulsed with heavy losses. These SS units were never able to eliminate fighting groups completely; they always seemed to melt away and reassemble in another location, ready to fight.

With the arrival of the 19th Panzer Division, however, the battle rapidly changed from one of attrition to the methodical reduction and defeat of the AK. Unlike the SS men, these Wehrmacht troops had a high level of tactical skill and fought in combined-arms units. Tanks, infantry, and artillery were closely coordinated, employing rapid maneuver and superior firepower to suppress defenders and eliminate strongpoints. The AK was simply not prepared for this level of combat, and its fighters were completely outmatched. The rapid collapse of AK forces in the Mokotów and Żoliborz districts brought an end to the uprising.

Several lessons of this extraordinary battle stand out for the modern practitioner of warfare. First, never underestimate the symbolic power of a capital city. Other cities may fall, but a capital city will be defended with special intensity. The capital city represents the national identity; it is often the cultural, religious, and historical center of national life; defenders will go to extremes to protect it. The Poles began the uprising in Warsaw for emotional as well as strategic-operational reasons. They were fighting to regain their capital city, believing victory would restore their nation. They surrendered, after great losses, only when they had no further means with which to resist. That resistance, however, came at a terrible cost in human lives and brought the complete, deliberate destruction of Warsaw—a very telling indication of how important even an enemy understands a capital city to be to the moral, spiritual, and psychological condition of a nation.

Second, to defeat lightly armed or irregular defenders in urban battle, conventional armies require well-trained, disciplined, and combined-arms forces. High morale and esprit de corps can be overcome by large-scale units (regiments, brigades, or divisions) that can systematically suppress and overwhelm defenses and maneuver to close with the enemy. These units must be capable of maintaining a battle tempo that allows them to gain and maintain the initiative, giving the defenders little time to retreat and reorganize. Tanks, artillery, airpower, and infantry operating in close coordination and led by experienced combat leaders are decisive.

Third, the urban battlefield is never divorced from political-strategic concerns. Cities easily capture the attention of strategic leaders. How they perceive the battle and its potential outcome will shape larger political-strategic events. The capture or loss of a city can signal (regardless of its validity) decisive victory or defeat and completely reshape the battlespace. The outcome can become an important bargaining item for negotiations or lead to continuing operations to achieve even greater political-strategic goals.

Fourth, if an uprising of a lightly armed indigenous group is to succeed in urban combat against a far stronger occupation force of military and paramilitary units, it must be able to count on outside support, in both resupply and conventional forces. Fateful decisions of the Allies doomed this uprising to failure. Only Soviet armored divisions could have saved Warsaw; only regular resupply drops in preplanned zones could have sustained the AK until their arrival.

NOTES

1. Richard J. Evans, The Third Reich at War (New York: Penguin, 2009), 7; Halik Kochanski, The Eagle Unbowed: Poland and the Poles in the Second World War (Cambridge, MA: Harvard University Press, 2012), 81–81.

2. Evans, 11–13.

3. Mark Mazower, Hitler's Empire: How the Nazis Ruled Europe (New York: Penguin, 2008), 191–93.

4. E. D. R. Harrison, "The British Special Operations Executive and Poland," Historical Journal 43, no. 4 (December 2000): 1075; Norman Davies, Rising '44: The Battle for Warsaw (New York: Penguin Books, 2003), 191.

5. Davies, 177, 183.

6. Davies, 117–18, 121–23, 125.

7. S. Płoski, L. Dobroszycki et al., eds., Okupacia i ruch oporu w Dzienniku Hansa Franka 1939–1945, vol. 2, 1943–1945 (Warsaw, 1970), 327–28. See also Zbigniew Czajkowski, Warsaw 1944: An Insurgent's Journal of the Uprising (Mechanicsville, PA: Stackpole Books, 2012), 3–16, for activities conducted to harass the Germans and for squad-level training.

8. Aleksander Gieysztor, "The Warsaw Uprising in the Europe of 1944," Dialogue and Universalism, no. 5–6, (2004): 15.

9. Paul Carrell, Scorched Earth, vol. 2, Hitler's War on Russia, trans. Ewald Osers (London: George G. Harrap, 1970), 487, 508–509. See also Jerzy R. Krzyzanowski, "The Unforgettable 1944," Dialogue and Universalism, no. 5–6 (2004): 40–41, for an account of AK actions and encounters with Soviet forces in eastern Poland.

10. Irina Mukhina, "New Revelations from the Former Soviet Archives: The Kremlin, the Warsaw Uprising, and the Coming of the Cold War," Cold War History 6, no. 3 (August 2006): 400. The Soviet broadcast may be found in Gieysztor, "Warsaw Uprising," 18.

11. Krzyzanowski, "Unforgettable 1944," 46.

12. Jordan Szczygiel, "Warsaw Uprising of 1944: A Touchstone in United States and Russian Relations" (Honors scholar thesis, University of Connecticut, 2013), n.p.

13. Mukhina, "New Revelations," 398. Gieysztor, "Warsaw Uprising," 18.

14. Wiadyslaw Bartoszewski, “The Warsaw Uprising: Facts and Afterthoughts,” Dialogue and Universalism, no. 5–6 (2004): 33. Matthew R. Schwonek, “Gen. Kazimierz Sosnkowski’s Order of the Day, no. 19,” Journal of Slavic Military Studies 21 (2008): 369.

15. Bartoszewski, 19.

16. Robert Forczyk, Warsaw 1944: Poland’s Bid for Freedom (Osprey, 2009), 25.

17. Gieysztor, “Warsaw Uprising,” 19–20.

18. Alexandra Richie, Warsaw 1944: The Fateful Uprising (London: William Collins, 2013), 482; Gieysztor, “Warsaw Uprising,” 20.

19. Richie, 194.

20. Ryszard Jozef Borenski,“The Uprising: Day Four,” Dialogue and Universalism, nos. 7–9 (2006): 125.

21. Richie, Warsaw 1944, 214; Davies, Rising ’44, 254.

22. Krzyzanowski, “ Unforgettable 1944,” 47.

23. Forczyk, Poland’s Bid for Freedom, 39–40.

24. Richie, Warsaw 1944, 222.

25. Kochanski, Eagle Unbowed, 408–11.

26. Mukhina, “New Revelations,” 400.

27. Mukhina, 407. By 1944, 800,000 civilians had already been killed. After the battle another 250,000 civilians were forcibly evacuated from the city and sent to camps.

28. Davies, Rising ’44, 251–52; Forczyk, Poland’s Bid for Freedom, 28–29.

29. Richie, Warsaw 1944, 261–63; Miron Białoszewski, A Memoir of the Warsaw Uprising, trans. Madeline G. Levine (New York: New York Review Books, 2014), 21–25.

30. Davies, Rising ’44, 384; Richie, 456–57.

31. Gieysztor, “Warsaw Uprising,” 18–20.

32. Davies, Rising ’44, 406.

33. Bartoszewski, “Facts and Afterthoughts,” 26.

34. Bartoszewski, 24–25; Jerzy Kioczowski, “The Warsaw Uprising in Memory and Historiography,” Dialogue and Universalism, nos. 7–9 (2006): 15.

35. Bartoszewski, 25.

36. Gieysztor, “Warsaw Uprising,” 19.

37. Andrzej Krzysztof Kunert, “Colonel Ignacy Matuszewski Remembers the Warsaw Uprising,” Dialogue and Universalism, nos. 5–6 (2004): 73. Quoted text is from Bartoszewski,“Facts and Afterthoughts,” 36.

38. Gieysztor, “Warsaw Uprising,” 18.

39. Gieysztor, 20.

40. Kioczowski, “Warsaw Uprising in Memory and Historiography,” 17.

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BRIAN DROHAN

5

THE BATTLE FOR MANILA, FEBRUARY–MARCH 1945

Balancing Force Protection and Civilian Casualties

IN THE AFTERMATH of the battle for Manila, the U.S. 145th Infantry Regiment reported that “due primarily to the differences in terrain and the presence of a large civilian population the fighting on Luzon and especially in Manila introduced facets of an entirely new aspect to a subject begun on December 7, 1941.”[1] The battle for Manila—waged from February 3 to March 4, 1945—was the largest urban engagement fought by the United States in the Pacific during World War II, the only one fought in a major city, and one of the few in which American troops encountered large civilian populations. But beyond

these distinctions, the battle's most sobering legacy was the extent of the destruction of Manila, once celebrated as the "Pearl of the Orient." The battle scarred Manila's population and infrastructure to such an extent that Newsweek magazine's on-scene reporter saw only "a doomed and tragic city."[2]

This chapter examines American perspectives on two issues that characterized the battle for Manila and remain relevant to the general study of urban operations: the presence of a large civilian population and the role of firepower. For American commanders, these two considerations were often in tension with each other.

Intermingled on the battlefield with American and Japanese forces were approximately one million Filipino residents of Manila, as well as several thousand Allied prisoners of war (POWs) and civilian internees who had been imprisoned after the Japanese occupation of the Philippines in 1942. The presence of civilians affected how the U.S. Army fought the battle in two important ways. First, the civilian presence shaped operational planning priorities, as U.S. forces identified the need to secure Manila's water supply and rescue POWs and internees. Capturing the water infrastructure intact would help prevent the humanitarian catastrophe of a million people lacking clean water for an extended period, whereas rescuing POWs and internees was a point of pride and would save the lives of prisoners who were potential targets of Japanese atrocities and were living on the verge of starvation. Second, Gen. Douglas MacArthur, commanding the Southwest Pacific Area, had restricted the use of artillery and prohibited air strikes within Manila, out of a desire to minimize civilian casualties and physical damage to the city.

MacArthur's restrictions on the use of American firepower, however, clashed with his orders to subordinate commanders. MacArthur constantly urged them to move with greater speed. The combination of MacArthur's desire to capture Manila quickly, his instructions to limit the use of artillery, and the tenacious Japanese defense of the city resulted in heavy American casualties. Corps and division commanders recognized that American firepower could serve as a form of force protection. They urged MacArthur to loosen artillery restrictions to save American lives, even at the cost of greater civilian losses. As American casualties increased, MacArthur removed the artillery limitations but did not approve aerial bombing. Ultimately, American troops came to rely heavily on overwhelming firepower to clear the city. While MacArthur's desire to limit civilian casualties is praiseworthy, military success—seizing Manila and destroying the Japanese garrison—remained the top priority. The Manila example, therefore, demonstrates how civilian considerations shaped military decisions but remained subordinate to operational needs.

RETURN TO THE PHILIPPINES

In late 1944, MacArthur's Southwest Pacific Area command was poised to strike the Philippine Islands and thereby avenge the loss of the islands to the Japanese in 1942 and secure a staging base for future operations against the Japanese

home islands.[3] With two field armies—the Sixth and Eighth—available for the Philippine invasion, MacArthur planned to first seize Leyte Island in the southern Philippines and then Luzon in the northern Philippines. Luzon was the archipelago's most militarily and politically significant island, with several airbases and the port facilities of the capital, Manila. The offensive began with MacArthur attacking Leyte in October 1944. U.S. forces next seized, in mid-December, Mindoro Island, where there was an airbase that would be used to support the Luzon landings.

The Luzon campaign began with an amphibious landing by MacArthur's main force—the I and XIV Corps of U.S. Sixth Army—at Lingayen Gulf on the island's north shore. On January 9, 1945, as the U.S. Navy battled waves of Japanese aircraft, including suicide kamikazes, the I and XIV Corps landed along a twenty-mile beachhead. By January 13 American aircraft had gained air superiority over Luzon. With the beachhead secured, XIV Corps pushed south to capture the strategically important airbase of Clark Field, then drove farther south through Luzon's Central Plains region to Manila, 120 miles from the landing beach. Meanwhile, I Corps cleared northern and eastern Luzon.

Opposing the American assault, Gen. Yamashita Tomoyuki commanded a force of 260,000 Japanese troops. Having led the 1941–42 conquest of Malaya and Singapore, Yamashita was an experienced and astute tactical commander. Unfortunately for him, since then Japanese naval forces had been devastated during battles around Leyte, leaving him with little support for the defense of Luzon. Yamashita's forces also had insufficient artillery, armor, communications equipment, and transportation assets, which meant that he was unable to conduct a viable mobile defense. He therefore decided to wage a campaign of attrition to prevent for as long as possible the Americans from recapturing the island. Yamashita divided his forces into three combat elements and assigned each to a particular region. The Shobu Group, with 152,000 soldiers, was Yamashita's main force and fell under his direct command. It was responsible for the mountains and jungles of northern Luzon—the area that Yamashita believed offered the best hope for slowing the American advance. The Kembu Group's 30,000 troops defended central Luzon, including the Clark Field airbase, as well as the Bataan Peninsula and Corregidor Island, which controlled access to Manila Bay. Finally, under the command of Lt. Gen. Yokoyama Shizuo, Shimbu Group's 80,000 soldiers occupied Manila, the mountain ranges east of the city, and southern Luzon.

On the American side, Sixth Army's XIV Corps advanced through the Central Plains toward Clark Field, driving a wedge between the Shobu and Kembu Groups. Resistance from the Kembu Group stiffened on January 23 as XIV Corps reached the vicinity of Clark Field. Under pressure from MacArthur to speed up the advance, the Sixth Army commander, Lt. Gen. Walter Krueger, ordered XIV Corps to leave one of its two divisions—the 40th Infantry Division—to capture Clark Field. Meanwhile, the rest of XIV Corps, commanded by Maj. Gen. Oscar Griswold and comprising the 37th Infantry Division, reinforced with

the 1st Cavalry Division, continued toward Manila.

As XIV Corps pushed south toward Manila, MacArthur ordered elements of Lt. Gen. Robert Eichelberger's Eighth Army to land on January 29 at San Angelo, near the Bataan Peninsula. Eighth Army's XI Corps landed and began moving inland to seize Bataan and Corregidor and so secure the approaches to Manila Bay. The 11th Airborne Division conducted a second amphibious landing, at Nasugubu, forty-five miles south of Manila, on January 31 and immediately advanced on the capital. With two divisions approaching from the north and one approaching from the south, U.S. forces were well positioned to encircle the city. The 11th Airborne, under Eighth Army's command during the approach to Manila, was to be reassigned to XIV Corps on February 10. The XIV Corps commander, Major General Griswold, therefore had three divisions at his disposal for the Manila operation: the 11th Airborne Division, 1st Cavalry Division, and 37th Infantry Division. Two separate tank battalions were attached to XIV Corps.

Griswold's plan had the 37th Infantry Division seizing Manila while the 1st Cavalry struck east into the mountains outside the city. Griswold changed his mind, however, because of the speed of movement of which the 1st Cavalry was capable and the realization that the Japanese planned to fight for the city rather than withdrawing, as MacArthur and his intelligence officers had expected. Instead, Griswold ordered a two-pronged advance with 37th Division on the right, western, flank and 1st Cavalry on the left, eastern, flank. Both units were to drive into the northern Manila suburbs, where 37th Division was to clear Manila north of the Pasig River and 1st Cavalry was to swing inland to the hills east of Manila to isolate the city and seize facilities there that were vital to the city's water supply. Concurrently, the 11th Airborne Division continued to push north. Ultimately, the idea was for 1st Cavalry and 11th Airborne to complete the encirclement of Manila by rendezvousing in the southern part of the city.[1]

JAPANESE DEFENSIVE PREPARATIONS

No engagement had been fought between American and Japanese forces in a large city, and neither side initially planned to fight in Manila. MacArthur expected the Japanese to declare it an open city, as he had in 1942. That was indeed the plan formulated by Yamashita, who intended for the Shimbu Group to fight only a delaying action before withdrawing most of its forces into the mountains to the east and southeast.[11] A somewhat complicated command relationship between Japanese army and naval forces in Manila, however, created a confusing situation of competing priorities. In the end, Rear Adm. Iwabuchi Sanji, commanding Manila's mixed army/navy garrison, determined that Manila offered better defensive positions than the mountains to the east where army commanders intended to fight. Iwabuchi decided that his best option was to fight in Manila.[12]

Iwabuchi's garrison predominantly comprised naval personnel but also included

three army battalions. The naval force consisted of a mixture of base defense troops, service units, crew members from sunken or disabled ships, and personnel of flying units whose aircraft were inoperable.[13] Hastily converted into infantrymen, they were organized into six naval battalions. Altogether, Iwabuchi commanded an estimated 16,000 to 18,000 troops.[1] The U.S. Army assessed that Iwabuchi had deployed approximately ten thousand troops within Manila's city limits, the remainder in outlying areas and along the approaches to the city.[1] Iwabuchi assigned the area north of the Pasig River to two army battalions—collectively the Northern Force—under Col. Noguchi Katsuzo. One naval battalion was deployed to the east of Northern Force, three others south of the Pasig River in central Manila. The three battalions—two naval and one army—of Southern Force, under the command of Capt. Furuse Takusue, held Nichols Field, Fort McKinley, and the shore of Laguna Lake.[1]

CENTRAL MANILA

Map redrawn from 37th Infantry Division, "Report after Action: Luzon Campaign," 26 and sketch 19; and XIV Corps, "After Action Report, M-1 Operation," 29 July 1945, 91, CARL

Initially, the Japanese expected the main American assault to come from the south; the Manila garrison realized that the American main effort would come from the north only after the Lingayen Gulf landings. This meant that the Japanese did not have time to reorient their forces significantly or construct new defenses. It is therefore no surprise that XIV Corps later described Japanese defenses as "well sited, well constructed, and fiercely held" but "not coordinated in an overall plan."[1] The quality of Japanese positions varied. Obstacles and fortifications in northern Manila were often haphazardly placed and hastily constructed. The defenses in southern Manila, where the American attack was expected, were more thorough.[1]

Japanese positions around Manila's outer ring ran along the Pasig River in the north of the city and included a heavily fortified zone in the south called the Genko Line. Flowing generally east to west through the city to Manila Bay, the Pasig formed a natural barrier against an advance from the north. Iwabuchi's forces prepared to demolish the bridges over the river and dug in on its south side. The Genko Line consisted of bunkers, pillboxes, minefields, roadblocks, barricades, tunnels, and fortified strongpoints throughout Manila's southern neighborhoods. Other key positions included Nichols Field to the southeast and Fort McKinley to the northeast.[1]

In central Manila, south of the Pasig River, Iwabuchi's troops turned large, sturdy structures such as government offices, hospitals, and university buildings into independent strongpoints. At road junctions they emplaced antitank and antipersonnel mines, as well as improvised obstacles such as steel rails embedded vertically in the ground, and fuel drums filled with dirt and spaced out to block vehicle movement.[2] These positions were supported by mortars and artillery, which were often concealed on rooftops or within buildings during the day and

moved to firing positions at night.[21]

The nucleus of the Japanese defense, however, was Intramuros, the old walled city, on the south bank of the Pasig about a mile from the bay. Built by the Spanish in the sixteenth century, Intramuros was a stone and earth fortress, enclosing about a quarter of a square mile, with numerous triangular bastions at key points. American intelligence officers described Intramuros as "medieval in structure" with defenses that "combined the fortress of the Middle Ages with the fire power of modern weapons." With underground tunnels and passageways, narrow streets, densely packed buildings, and walls between ten and forty feet thick, Intramuros was a formidable position, military artifact from a bygone era though it was.[22] American troops soon discovered that the Japanese fortifications generally, notwithstanding their improvised nature, were formidable.

ENTERING MANILA: THE AMERICAN ADVANCE

The American soldiers about to enter Manila had no experience of large-scale urban combat, but they did have substantial experience with jungle warfare, which was surprisingly similar in many ways. The builtup environment of urban terrain and the dense vegetation of jungles both restrict observation and fields of fire. Command and control of large maneuvers is difficult in both, which meant that small-unit initiative and leadership at the junior and noncommissioned officer levels were vital in cities and jungles alike. U.S. Army doctrine treated urban terrain as analogous to fortified positions. Urban combat doctrine and soldiers' experience with jungle fighting reinforced the importance of tanks and large concentrations of artillery to destroy fortified positions.[23]

It was despite this emphasis on firepower that MacArthur imposed his moratorium on aerial bombardment and restricted the use of artillery and mortars. Specifically, MacArthur's restrictions meant that, as the U.S. Army's official history notes, "artillery support was confined to observed fire upon pinpointed targets such as Japanese gun emplacements."[2] This method required a forward observer who could see the target, identify it as a military target, report its coordinates to the firing battery, and correct the inevitable early misses. Such restrictions minimized the risks of firing on the wrong target or accidentally targeting civilians.

But these limitations also created conflicting priorities: MacArthur wanted to protect the city and its population, but commanders from the 37th Division up to Sixth Army needed to minimize American casualties because of a shortage of replacements. The Pacific theater had long been a lower priority for replacement troops than the European theater, but since the German offensive in the Ardennes Forest had begun in late 1944 the requirements for replacements in Europe had increased. Also, XIV Corps anticipated that following the Philippine campaign it would rearm and prepare for an invasion of the Japanese home islands. Generals Krueger, Griswold, and Beightler shared the at least implied understanding that the seizure of Manila had to be completed with minimal losses.[2]

Notwithstanding the need to minimize American casualties and his own firepower limitations, MacArthur insisted that XIV Corps capture Manila quickly. One reason was concern for liberating Allied citizens and soldiers held by the Japanese. The Japanese had a reputation among Allied soldiers for atrocities, from the infamous Nanjing massacre of 1937 and the killing of hundreds of wounded Allied soldiers after the fall of Singapore in 1942 to the massacre of 139 American POWs on Palawan Island in December 1944. Intelligence reports indicated that several thousand civilians were interned on the campus of Santo Tomas University and that a mixed group of civilian internees and approximately eight hundred POWs was at Bilibid Prison. MacArthur was so worried about the fate of Allied internees and POWs that in January 1945 he had publicly announced that he would hold Yamashita personally responsible if they were harmed. This concern was felt also at XIV Corps headquarters: "It was believed that, when the pressure was put upon the Japanese within the city of Manila, the enemy might make some effort to harm these internees." Keen to prevent future atrocities, XIV Corps made the liberation of POWs and internees "one of the first objectives within the city proper."[2]

With MacArthur continually urging a faster advance, the 1st Cavalry Division prepared two "flying columns" for a rapid thrust into Manila. Each column was an ad hoc arrangement built around a cavalry (i.e., rifle) squadron, tank company, howitzer battery, and motor transport units of trucks and jeeps to move the cavalrymen quickly. The flying columns set off on February 1 from staging areas near Cabanatuan, over one hundred miles north of Manila, and reached the Grace Park suburb of northeastern Manila on the evening of February 3 before driving on to Santo Tomas University, where the cavalrymen liberated 3,521 American and Allied civilian internees.[2] Lead elements from the 37th Division entered Manila on February 4 and seized Bilibid Prison, where another 1,200 Americans—about four hundred civilian internees and the eight hundred prisoners of war—were freed from captivity.[2]

On February 5, with Santo Tomas and Bilibid Prison in American hands, the 37th Division began clearing neighborhoods along the Pasig's north bank. Although the Japanese Northern Force defenses mainly consisted of small units in fixed positions, such as pillboxes and machine-gun nests, Colonel Noguchi's force gave ground slowly.[2] When Noguchi's remaining troops withdrew south across the Pasig, they destroyed the bridges and set fire to equipment, stores, and facilities of military value in the North Port Area and along the riverbank. A change of direction and increased intensity of the wind in the evening of February 5 spread the flames into residential areas. The 37th Division had to divert its attention briefly from fighting the enemy to fighting fires, but by February 6 the 37th had succeeded in clearing its assigned sector save one isolated pocket of Japanese resistance.[3]

As the 37th Division secured the north bank of the Pasig, the 1st Cavalry pushed east across the San Juan River to secure the eastern suburbs of San Juan del Monte and New Manila and to capture vital water facilities. In the eastern sub-

urbs, fire from three 120-mm naval guns—removed from ships and converted for use on land—destroyed three American tanks and disabled two more.[31] The Japanese halted the first assault on February 7, but the following day the cavalrymen tried again, this time with support from a tank company and two artillery battalions. American artillery fire was limited to "observed fire" at Japanese strongpoints, but these strongpoints were so intermixed with residential areas that the American artillery destroyed many homes in the process of eliminating the fortifications.[32]

While one cavalry regiment secured the eastern suburbs, another advanced north toward two water system facilities: the Novaliches Dam and the Balara water filters. In addition to those structures, other vital water infrastructure included the San Juan Reservoir, the Montalban Dam, the Ipo Dam, and the pipelines connecting these installations. These sites were to the east and northeast of the city, between ten and fifty kilometers from central Manila. "Early seizure of these sources of water supply," as Sixth Army concluded, was "vital to the health and even to [the] existence of the city's population."[33] If Sixth Army captured these facilities intact, U.S. forces estimated, they could support the population for two weeks until additional supplies arrived and damaged infrastructure was repaired.[3] Although the fight over the water supply was not an urban battle in the sense that it was not fought in a city, capturing key water infrastructure played a vital part in the liberation of Manila.

Japanese troops too recognized the importance of the water system and planted explosives at key points, but American forces seized all important facilities before any significant damage had been done. Japanese troops managed to destroy a forty-five-foot section of the pipeline between the Montalban Dam and the Balara filters and to emplace one hundred pounds of dynamite at the Novaliches Dam as well as 1,500 pounds of explosives at the Balara filters. Thankfully for the Americans, on February 6 the 1st Cavalry Division seized the Novaliches Dam and Balara filters before the Japanese could detonate the explosives. On February 8, cavalrymen captured the San Juan Reservoir intact.[3]

MANILA WATER SUPPLY

Map redrawn from Sixth Army, Report of the Luzon Campaign, 4:125, fig. 71, CARL

The water infrastructure outside the city had been captured intact, but American engineers encountered significant damage to the pipelines that distributed water throughout the city. Many water lines throughout Manila had been damaged during the fighting. While these breaks were being repaired, Sixth Army established thirty distribution points, supported by twelve mobile water purification units, throughout Manila to supply water to the inhabitants. Thanks to prior planning and the high priority assigned to the capture of the city's key water supply infrastructure, American forces managed to avoid the public health catastrophe that would otherwise have occurred.[3]

By the morning of February 7, XIV Corps had cleared the north bank of the

Pasig. One Japanese stronghold remained, in the Tondo district. Griswold shifted his corps' focus from securing northern Manila to crossing the Pasig southward. But the Japanese having destroyed all bridges across the river, XIV Corps would have to conduct an amphibious crossing. Griswold assigned that task to Maj. Gen. Beightler's 37th Division.[3]

CROSSING THE PASIG RIVER

Across from the 37th Division, the eight hundred Japanese naval troops dug in on the river's south bank benefited from favorable geography. To the west, where the Pasig flows into Manila Bay, the walls of Intramuros dominated the river. Concrete seawalls lining the riverbank from Intramuros east to the Malacañang Gardens botanical park were impassable for amphibious tractors and assault boats. The entire area was covered by Japanese artillery fire from the hills east of Manila as well as from positions in central Manila. The only section that was not either heavily defended or impassable was the botanical park itself. Accordingly, Beightler decided to cross there.[3]

Beightler deployed two regiments for the assault: the 148th would cross first and clear the neighboring Paco and Pandacan districts, while the 129th would cross next and seize Provisor Island. On February 7, after a heavy artillery barrage against the south bank, the 148th crossed using thirty assault boats in five round trips. Despite losing fifteen soldiers killed and one hundred wounded, the 148th brushed the defenders aside and quickly established a beachhead. By 8 p.m. two battalions had crossed the river. The following day, the 129th attacked Provisor Island.[3]

The fight for Provisor Island demonstrated how American troops came to rely on firepower to overcome tenacious Japanese resistance. Provisor Island was around four hundred yards wide and separated from the south bank of the Pasig by a canal. The island was an important target because it was the site of a boiler plant and power-generating station for Manila's electric grid. Japanese defenses, although hastily prepared, effectively covered the approaches to the island. Intense machine-gun and mortar fire stopped the 129th's initial attack on the night of February 8, the regiment losing two assault boats. It took several more attempts with artillery support before the 129th managed to shuttle around ninety soldiers across the canal. Supported by tank destroyers firing from the Pasig's north bank, the infantrymen slowly cleared the boiler plant and power station, moving room by room in close fighting. However, as American troops dislodged the defenders, Japanese 20-mm and 40-mm guns in central Manila opened fire on the island. Heavy weapons fire from both sides demolished much of the power station, and Japanese troops sabotaged equipment before retreating. Sixth Army would not be able to generate electricity for the city using Provisor Island anytime soon, nor was the fight for the island the last time that the 37th called on artillery and tanks to clear Japanese defenses.

As the 37th pushed into central Manila, the infantrymen discovered that Iwabuchi's Central Force had established major strongpoints at nearly every

significant building complex. Each had to be captured individually. Built to withstand earthquakes, many of these buildings were too strong to be demolished by artillery or tank fire. Consequently, the interior of each building had to be cleared of Japanese troops by infantrymen. XIV Corps developed a combined-arms technique involving artillery—in the form of 155-mm howitzers—as well as tanks and tank destroyers firing at nearly point-blank range into a building, beginning with the top floors. "The best method," XIV Corps concluded, "is to pound the roof and top floors first and work the fire down to the basement and ground floor." During this initial pounding, tanks and artillery fired high explosive and white phosphorous shells into the upper floors. The explosions, fire, smoke, and toxic vapors produced by this combination of munitions was intended to drive the Japanese defenders out of the top floors and away from doors and windows so that they could not fire on American troops before they entered the building. It often took several days to clear a single large, fortified building. [1]

Clearing these strongpoints was a brutal, close-range affair fought out at platoon and squad level. Squads established assault teams equipped with bazookas and demolitions for blowing holes in walls. Assault teams used grenades for clearing Japanese troops out of rooms, pillboxes, or bunkers; flamethrowers and machine guns assigned at platoon level provided additional support. While most buildings in Manila could be cleared by a squad or platoon, the larger municipal buildings required company-level assaults. To keep the momentum of the assault moving forward toward the main objective of Intramuros, XIV Corps bypassed several of the larger structures—City Hall as well as the Legislative and Finance Buildings—capturing them only after Intramuros fell. [2]

American casualties mounted quickly. The 37th Division's figures for the first several days after crossing the Pasig tell a grim story: fifteen killed and seventy-four wounded on February 8; nineteen killed and 216 wounded on February 9; twenty-six killed and ninety-one wounded on February 10; twenty-eight killed and 174 wounded on February 11; and another twenty-four killed and 173 wounded on February 12, for a total of 840 casualties in five days. [3] These losses disproportionately affected the 37th's three infantry regiments, which bore the brunt of the combat.

The problem was compounded by the dearth of replacements. The 148th Infantry Regiment, for instance, had received only five new soldiers since January 9, while the 129th Infantry Regiment had received none since the Luzon operation began. By the end of the battle, the 37th had received only 405 replacements despite suffering 3,863 total casualties, including 381 killed. The result was that the 148th was understrength by almost six hundred troops, the 129th by seven hundred. The overwhelming majority of these shortages were in the division's rifle companies, the units most involved in the fighting. By February 10, the 148th's rifle companies were short an average of fifty soldiers. With an authorized strength of six officers and 187 enlisted troops, these shortages meant that the 37th's rifle companies were manned just below 75 percent strength.

Officer casualties were particularly high. Over the course of the Luzon campaign, the 1st Battalion, 129th Infantry Regiment reported, "of the battalion's 35 officers, 28 were lost partially or permanently to the battalion." XIV Corps confirmed that in general "the casualty rate was alarming" and warned that "more powerful measures were required" to keep the advance going.

The combination of strong Japanese defenses and increasing American casualties led at this point to a reassessment of MacArthur's restrictions on the use of artillery within the city. Nearly every major building from the Paco district westward to Intramuros was a strongpoint; XIV Corps decided that American soldiers' lives mattered more than Manila's infrastructure and civilian population. According to the U.S. Army's official history, "if the city were to be secured without the destruction of the 37th and 1st Cavalry Divisions, no further effort could be made to save the buildings; everything holding up progress would be pounded." Maj. Gen. Beightler justified the need for more artillery fire by arguing that when relying on infantry assaults alone, "none of our tactics forced an enemy withdrawal even in part." It was only against areas of the city "upon which massed artillery fire had been placed" that "considerable success was experienced in silencing enemy guns." As the infantry pushed through central Manila and encountered strongpoint after strongpoint, "it became apparent," XIV Corps concluded, "that destruction of the buildings in the path of advancing troops was essential. Artillery fire was still restricted to known Japanese positions but so many enemy riflemen were interspersed within the positions that artillery area fire immediately in front of the advancing troops became the rule rather than the exception." The result, XIV Corps assessed, was "almost total destruction of the defended areas." By the end of the battle, nearly all of central Manila had been devastated.

MacArthur ultimately agreed to loosen the artillery restrictions. The 37th Division's official after-action report noted that "as the tactical need for heavy fire power increased, permission was sought and obtained to place area artillery fire in front of our advancing lines without regard to pinpointed targets." [1] That is, "observed fire" against a point target—the type of fire that MacArthur had expected under his original orders—was supplanted by "area fire," shooting into a zone. Area fire was by its nature less precise. There is no way to know exactly how many civilian casualties were caused by American actions, but given the presence of thousands of civilians, the extensive Japanese defenses, the explosive power of modern artillery ammunition, all contained in a small area of between three and four square miles, the shift to area fire in central Manila undoubtedly put civilians in greater danger.

While the 37th Division drove toward Intramuros, the 1st Cavalry finished clearing the eastern suburbs and on February 10, after a heavy artillery bombardment, crossed the Pasig near the Makati district. Unlike the infantrymen of the 37th, the cavalrymen encountered no Japanese resistance as they disembarked and advanced south. The following day, they reached the Polo Club in southern Manila and rendezvoused with patrols from the 11th Airborne. The three Amer-

ican divisions had succeeded in encircling the remaining Japanese defenders in central Manila. [2] The 11th Airborne's fight to reach the 1st Cavalry had not been as easy as the latter's movement south of the river, however.

BREAKING THE GENKO LINE

As the 37th and 1st Cavalry Divisions fought to the north and east of Manila, the 11th Airborne Division landed at Nasugubu, south of the city, and struck northward toward Manila's southern suburbs. There the division encountered the well-prepared Japanese defensive positions of the Genko Line. By February 4, the division was on the south side of the Parañaque River along the Route 1 coastal highway, three miles south of Manila. Manned by naval troops from the Southern Force, Japanese positions facing the 11th Airborne were well camouflaged and covered roads and key intersections that an attacking force would have to cross to enter the city. Furthermore, many of these positions were reinforced with converted 6-inch naval guns, similar in size to American 155-mm howitzers. [3] The paratroopers encountered so many naval guns that one exasperated company commander reportedly exclaimed, in reference to the U.S. Navy aircraft carrier task forces that were patrolling the seas for the Japanese fleet, "If anybody is wondering what happened to the Japanese Navy he can stop worrying. I've found it." The Japanese had also repurposed the fortified revetments on Nichols Field. Originally designed to protect parked aircraft from air strikes, in the hands of the defending Japanese naval troops these twenty-foot-thick revetments became heavily fortified strongpoints ringed with barbed wire. These defenses made the Genko Line a daunting obstacle.

To complete the encirclement of the Manila garrison, the 11th Airborne had to seize two key facilities: the Nichols Field airbase and Fort McKinley. The push toward Nichols Field began on February 5, when the 11th Airborne's 511th Parachute Infantry Regiment crossed the Parañaque River to clear the northern riverbank and seize ground that could serve as a jumping-off point for the assault on Nichols Field proper. Fighting house to house, the 511th took two days to reach the airfield. It was then reinforced by the 188th Infantry Regiment, and the two regiments attacked on February 7, only to be beaten back by heavy Japanese machine-gun, mortar, and artillery fire. After two more days of slow gains, the 11th Airborne had only managed to seize part of the western runway.

Unable to break through, American commanders opted to use more firepower. The 11th Airborne possessed only artillery that could be parachuted from aircraft: two 75-mm howitzer battalions and one shortbarreled 105-mm howitzer battalion. It did not have the artillery support that was available to a standard infantry division. The paratroopers' artillery simply too light to destroy the well-prepared defenses around Nichols Field. Infantry assaults against them, meanwhile, resulted in heavy casualties. Consequently, on February 10, Eighth Army passed tactical control of the 11th Airborne to Sixth Army, which allowed XIV Corps to coordinate directly with 11th Airborne. The two headquarters quickly prepared an artillery fire support plan that would provide 155-mm howitzer and 8-inch gun fire from XIV Corps artillery. In the event, an air strike

from Marine Corps dive-bombers—being outside city limits, Nichols Field was not subject to MacArthur's prohibition on aerial bombardment—was added to the heavy artillery support, and the combination proved effective. When the 11th Airborne resumed the assault on February 12, its paratroopers captured most of Nichols Field by nightfall and completed the operation on February 13. The cost was high: the division suffered nine hundred casualties, including around 170 killed, in the two weeks between the Nasugubu landings and the capture of Nichols Field.

After seizing Nichols Field, the 11th Airborne shifted its main effort inland toward Fort McKinley and again employed heavy firepower before assaulting the position. The 11th Airborne's historian described the attack as "mainly a war of artillery and planes," involving a "weeklong softening up process" prior to the ground attack. A final napalm strike was ordered moments before the ground attack began on February 17. Notwithstanding the extensive bombardment, many Japanese positions remained intact. Elements from the 11th Airborne attacked from the north while troops from the 1st Cavalry struck from the south, clearing these remaining defenses with flamethrowers and demolition charges. By the end of the day, Fort McKinley had been secured. As with the assault on Nichols Field, firepower had been vital to its capture.

SEIZING INTRAMUROS

Meanwhile, the Japanese were suffering from communication problems. Given the wide dispersal of Yamashita's main force—the Shobu Group over 150 miles from Manila in northeastern Luzon and elements of Yokoyama's Shimbu Group concentrated to the east and south—Yamashita and Yokoyama had difficulty coordinating operations with Iwabuchi. On February 9, Iwabuchi moved his headquarters from central Manila to Fort McKinley and Yokoyama began planning a counterattack for February 13 against the 1st Cavalry Division. But on the 11th Iwabuchi relocated his headquarters again, to the Agricultural Building in central Manila, apparently believing that Fort McKinley was likely to fall into American hands before the city itself. On the 13th Yokoyama postponed his counterattack planned for that day and ordered Iwabuchi to withdraw from Manila. Two days later, Yamashita himself ordered Iwabuchi to withdraw. Yokoyama's delayed counterattack began on February 15 but was easily rebuffed by the 1st Cavalry Division. Inside the city, Iwabuchi did not receive Yamashita's or Yokoyama's orders to withdraw until February 17, which was too late, because the 1st Cavalry and 11th Airborne Divisions had already encircled the city. The Manila garrison was on its own. [1]

American attention now turned to the capture of Intramuros. Major General Griswold assigned the task of seizing Intramuros and the nearby port area to the 37th Division, the final assault to be delivered on February 23. Over the days preceding the assault, the 37th seized the Manila Post Office and City Hall to open the approach to Intramuros. The Post Office, along the Pasig River at Intramuros' northeast corner, was an excellent position from which to cover an assault across the river from the north into the Fort Santiago area and fire into

the flank of forces approaching Intramuros from the east. It had to be taken before continuing into Intramuros. [2] From City Hall, Japanese troops could fire along the length of Taft Avenue into the flanks of attacking American infantry. [3] Once the Post Office and City Hall were secured, XIV Corps moved 155-mm howitzers and 8-inch guns close to the walls. Using direct fire from eight hundred yards—point-blank range for heavy artillery—the guns poured three hundred rounds into two sections of the wall. The shellfire opened two breaches, one on the north wall along the Pasig River and the other at the northeast corner.

Expecting the same tenacious Japanese resistance that they had encountered elsewhere in Manila, Griswold and Beightler sought ways to reduce the likelihood of heavy American casualties during the assault. XIV Corps broadcast loudspeaker messages in Japanese in an unsuccessful attempt to convince Japanese troops to surrender. Another round of loudspeaker messages appealed to Japanese commanders to release the approximately two thousand Filipino civilians held as hostages inside Intramuros, but this too failed. Disregarding the presence of civilians inside Intramuros, Beightler and Griswold asked the Sixth Army commander, General Krueger, to approve bombing by several squadrons of dive-bombers and P-38 fighter-bombers equipped to drop napalm. Krueger intended to approve the request but had to route it through MacArthur first. MacArthur, however, was incensed, calling the idea of bombing part of the city inhabited by Filipino civilians "unthinkable." He further opined that "the inaccuracy of this type of bombardment would result beyond question in the death of thousands of innocent civilians. It is not believed moreover that this would appreciably lower our own casualty rate although it would unquestionably hasten the conclusion of the operations." MacArthur denied the request. In the end, aerial bombardment proved unnecessary; by the end of the battle, artillery and tank fire had destroyed or heavily damaged every building within Intramuros.

Prohibited from employing air strikes, Griswold's and Beightler's staffs planned an hour-long preparatory artillery bombardment for the morning of February 23. Almost every gun in XIV Corps was available for the bombardment, including heavy 8-inch and 240-mm howitzers as well as direct fire from tanks. Planners divided the entire Intramuros area into sectors, which were labelled alphabetically from A to T and assigned to specific tank, tank destroyer, or artillery units for bombardment. The fire support plan also specified rates of fire, the number of rounds that each unit was to fire per minute into its assigned sector. For example, the Fort Santiago area—sector K—was designated to receive four hundred rounds from XIV Corps' 155-mm howitzers, while the northeastern and southern quarters, sectors P and R, respectively, were each assigned to an artillery battalion instructed to fire two rounds per gun, per minute. In total, artillerymen fired 7,896 rounds into Intramuros in what Griswold described as the most intense barrage he had ever seen.

After the barrage, the 129th Infantry Regiment crossed the Pasig River in assault boats and struck the northern breach, while the 145th Infantry Reg-

iment assaulted the northeastern breach. Simultaneously, the 12th Cavalry Regiment, attached to the 37th Division for this engagement, cleared the port area west of Intramuros. Except for Fort Santiago and a cluster of buildings in Intramuros' southwest quarter, the infantrymen encountered only sporadic resistance as they swept building by building and street by street. The lead platoons from the 145th Infantry, for instance, entered the northeastern breach at 8:33 a.m. without suffering a single casualty. In its after-action report the 37th Division noted the effectiveness of the artillery bombardment: "the terrific preparation permitted the occupation of the walls with minimum opposition," and the "Japanese methods of strong cross fires at each intersection had been disrupted by the artillery preparation so that only isolated guns remained." After breaking through Fort Santiago's gates with the help of a tank platoon, the 129th fought what devolved into a room-by-room struggle in which American infantrymen used flamethrowers, grenades, and demolition charges to clear the passageways, tunnels, and sixteenth-century dungeons. By February 24, Intramuros was in American hands. Most of the nearly two thousand Japanese defenders were killed during the assault—all at a cost of twenty-five Americans killed. But the infrastructure within Intramuros was shattered. American firepower helped reduce American casualties and nearly annihilated the enemy but proved devastating to the city itself.

With Intramuros captured, the 37th and 1st Cavalry turned toward clearing the final pockets of Japanese resistance in the Agricultural, Legislative, and Finance Buildings. As XIV Corps later noted, the struggle for these buildings "proved to be the heaviest fighting in Manila." Iwabuchi committed suicide with his staff inside the Agricultural Building on February 26. The 1st Cavalry took the Legislative Building on March 1, and the Finance Building fell to the 37th Division on March 3. On the 4th, Griswold informed Krueger that the city had been secured. [1]

CIVILIANS ON THE BATTLEFIELD

The city and its civilian inhabitants suffered tremendously during the fighting from both Japanese and American actions. An estimated 100,000 Filipinos died during the battle. [2] Not all civilians were helpless bystanders, however. Filipino guerrillas increased their activity during the battle, attacking isolated Japanese outposts, cutting telephone lines, and reporting Japanese positions to U.S. forces. [3] Although Filipinos overwhelmingly sympathized with the guerrillas and Americans, most civilians simply sought shelter and survival during the battle. On one hand, the Japanese viewed Filipinos as a hostile population and considered every male a possible guerrilla fighter. This attitude led them to burn much of the city, rape Filipina women, and murder thousands of civilians. On the other hand, and despite a desire to minimize civilian suffering, the Americans' widespread and increasingly intense use of artillery destroyed much of the city and almost certainly killed many civilians. Sixth Army did, however, provide much-needed humanitarian aid.

Japanese units intentionally targeted Manila's infrastructure as well as its civil-

ian population. On February 3, Iwabuchi ordered his forces to destroy port facilities, motor pools, bridges, commercial areas, and such key infrastructure as the water supply and electrical power stations. Iwabuchi instructed his troops that preparations for these scorched-earth tactics were to be carried out in secret, "so that such actions will not disturb the tranquility of the civil population nor be used by the enemy for counter-propaganda." Consequently, Japanese units staged large quantities of aviation fuel and numbers of bombs throughout the city with which in due course they unleashed a wave of destruction, targeting military installations, commercial buildings, and financial centers.

Civilian massacres were commonplace; American war crimes investigators later uncovered dozens of mass graves throughout the city. Neither men, women, nor children were spared when Japanese forces ransacked the German Club and Red Cross Headquarters buildings, where several hundred people had sought refuge. In one gruesome example, Japanese troops converted a house into an execution center by cutting a large hole in the floor of an upstairs bedroom. Victims were marched upstairs, blindfolded, made to kneel at the edge of the hole, then beheaded and kicked through the hole into the ground floor room below, which quickly filled up with bodies and severed heads. Two hundred severed heads were later found in that location alone. In Intramuros, American soldiers of the 37th Division found a twentyfive-square-foot room in which the burned bodies of Filipino men were stacked "five layers deep." In some instances Japanese forces used civilians as human shields. Similar atrocities occurred throughout Japanese-occupied neighborhoods.

In addition to Japanese atrocities there was for Manila's inhabitants American artillery fire. MacArthur's prohibition against air strikes was well intentioned, but the heavy use of artillery throughout the city was bound to result in civilian casualties. When XIV Corps entered central Manila, the shift to area fire increased the likelihood of killing civilians, because forward observers no longer needed to identify specific Japanese positions, merely general areas where Japanese troops were. Sixth Army recorded that "hardly a building in downtown Manila escaped heavy damage or destruction" and described Intramuros as "a mass of rubble." As the U.S. Army's official history commented of the Intramuros bombardment (in an implicit critique of MacArthur's restrictions), "Just how civilian lives could be saved by this type of preparation, as opposed to aerial bombardment, is unknown. The net result would be the same: Intramuros would be practically razed." XIV Corps also engaged in counterbattery fire—the targeting of enemy artillery—at night. But the technology of the era limited nighttime target identification and fire direction to observed muzzle flashes, which meant that spotters directed counterbattery fire onto areas of the city where they saw flashes. This method was inherently inaccurate.

According to the historian William Manchester, "seventy percent of the utilities, 75 percent of the factories, 80 percent of the southern residential district, and 100 percent of the business district were razed" by the end of the battle. [1] General MacArthur was so disturbed by the destruction that on February 27, at a formal

ceremony marking the restoration of Philippine governmental authority, he was overcome and could not finish his remarks. "To me," MacArthur recalled of the city's devastation, "it seemed only the culmination of a panorama of physical and spiritual disaster." [2]

Manila's civilian population had been caught in all of this already suffering from hunger. Food supply had been a problem in Manila before the battle began. Japanese propaganda promoted the notion of Japanese/ Filipino "co-prosperity," but the economic realities of occupation spoke otherwise. Japanese economic restructuring led to food shortages, currency inflation, and in turn a decline in Filipinos' ability to purchase the food that was available. Japanese attempts to extract food resources to support their war effort involved raids on Filipino homes to confiscate household chickens and search for hoarded rice or canned goods. Japanese requisitioning and the breakdown of the city's provisioning system resulted in widespread starvation during 1943 and 1944. [3]

American planners had, as noted above, anticipated the need for humanitarian aid and military support for the restoration of Philippine civil government but not, as it proved, the massive scale of these challenges. Prior to the Philippine campaign, the U.S. Army established thirty Philippine civil affairs units (PCAUs) to provide immediate food relief, establish hospitals, reconstitute local government, and organize the local economy—often by hiring Filipinos as labor to support American military efforts. Officers leading these units came from a variety of backgrounds, including medicine, agriculture, labor relations, law enforcement, and administration. Enlisted soldiers were recruited largely from Filipino-American communities. Each unit consisted of ten officers and thirty-nine other ranks.

During the Manila campaign, Sixth Army divided the city into eight sectors and assigned a PCAU to each. This allocation proved insufficient; as a result of the destruction of the city, the PCAUs encountered larger numbers of civilians than expected. The relief problems, XIV Corps concluded, were "greater, by far, than anticipated.... [B]urned out areas presented a great housing and evacuation problem. Due to the large number of civilian casualties, and the wholesale destruction of buildings and hospitals, there arose a great shortage of facilities for the care of sick, wounded, and destitute." PCAUs expected to support 200,000 people in Manila but soon found that they needed to provide "direct relief" to 350,000.

RECONSTRUCTION AND AFTERMATH

After capturing the city and meeting the civilian population's immediate needs, the next step was to restore services and infrastructure to a usable condition. The priority went to essential civil services and strategic infrastructure. Restoring infrastructure was especially important, because MacArthur and his senior commanders were under the impression that the Philippines would serve as a key base for a future invasion of Japan. The development of the atomic bomb was not widely known, so soldiers were preparing for more hard-fought battles

over the next year or more.

To provide municipal services and rebuild key facilities, Sixth Army established an Engineer Command. Consisting of construction units and Army personnel who had civilian experience working for public utilities or in local government, the Engineer Command rebuilt bridges, cleared rubble from roads, repaired the sewage and electrical distribution systems, and brought in mobile water purification units to provide civilians with clean water while the city's water supply system was under repair. Manila's electrical system also required extensive repair, as shelling and the fires that burned through the city had severely damaged distribution lines and step-down stations that supplied electricity from the main power stations to individual neighborhoods, homes, and office buildings. The engineers managed to provide 1,700 kilowatts of power to essential facilities by February 26. Additional support came from two U.S. Navy destroyer escorts, USS Whitehurst (DE 634) and USS Wiseman (DE 667), which provided electricity to part of Manila for several months. Structures deemed of military and civilian necessity were to be rebuilt first, but with damage estimated at $50–$75 million it would take years for the city to recover.

Manila did not mark the end of the Luzon campaign, but it was an important strategic and symbolic victory. By securing Manila's port facilities and factories, the Americans had obtained an important base for the anticipated assault on the Japanese home islands. Symbolically, the recapture of Manila represented the return of President Sergio Osmeña's Philippine government from exile and signaled the impending liberation of the islands from Japanese rule. Meanwhile, with Manila secured, MacArthur turned toward Yamashita's main forces in the northeastern jungles and mountains, where fighting raged until the announcement of Japan's surrender on August 15, 1945. On receiving surrender instructions, Yamashita led his surviving soldiers down from the mountains and capitulated. The Luzon campaign was over, as was the war, and Yamashita was put on trial for war crimes related to the Japanese massacres of civilians in Manila. Although he had little control over events on the ground in the capital during the battle, Yamashita was held accountable for Japanese soldiers' atrocities. He was found guilty and executed in February 1946.

CONCLUSION

Ultimately, the battle for Manila demonstrates that conceptualizing urban operations requires a broader perspective than the physical space where direct combat happens. One key insight is that commanders and planners need to consider a city's human geography, particularly the presence and disposition of civilians on the battlefield. Commanders must be prepared to sustain the livability and functionality of the city and its population by preserving or restoring key services and infrastructure, such as clean water, electricity, and the availability of food. In planning the assault on Manila, American forces prioritized the capture of key infrastructure and prepared for the large-scale deployment of civil affairs units and engineers. In the event, however, much of the infrastructure that U.S. forces had hoped to save was destroyed during the fighting,

and the PCAUs proved insufficient to meet much larger-than-anticipated needs. Fortunately, the capture of Manila's water system relatively undamaged helped prevent an even worse humanitarian situation.

A second insight is that in urban operations civilian considerations are often at odds with the advantages provided by superior firepower. In Manila, American commanders used firepower to compensate for manpower shortages and as force protection. Worn down from years of fighting troops who rarely surrendered, American forces saw the use of heavy weapons as a way to kill Japanese troops without putting Americans in as much danger as infantry-centric close combat involved. Furthermore, American soldiers believed that Manila would not be their last battle. MacArthur and every soldier under his command expected to be in the Japanese home islands over the coming year, facing Japanese forces fighting to the death. Commanders were eager to use any tool that could destroy the enemy while minimizing American casualties. [1] In Manila, heavy weapons most likely did that, but they also increased civilian deaths and the cost—as well as the time required—to rebuild the city. This reliance on firepower became a key aspect of the U.S. Army's "way of warfare" during later conflicts in Korea and Vietnam. [2]

Taken together, these insights reinforce the idea that the decision as to whether to protect civilians or target them is often instrumental—it serves a practical purpose. [3] During the battle for Manila, the American decision to protect civilians, up to a point, served the purpose of safeguarding a friendly population. American plans for seizing Manila's water supply, providing humanitarian aid, and supporting reconstruction efforts reflected this purpose. Likewise, the Japanese decision to target civilians served the purpose of eliminating the potential threat, however far-fetched, of an entire population hostile to Japanese interests.

Yet both American and Japanese approaches to the civilian population were also driven by cultural considerations. In the American case, Filipinos were generally viewed patronizingly, as friendly but backward, dirty, or childlike. One wonders whether commanders like Griswold and Beightler would have been as eager to bomb Intramuros if it had been populated by American citizens instead. Likewise, Japanese massacres of Filipinos, while far more intentional than the "collateral damage" to civilians inflicted by American forces, were also driven by attitudes of racial superiority—attitudes that fueled atrocities in China and elsewhere during the war.

As shocking as was the plight of civilians during the battle, it is important to note that many contemporary international legal protections for civilians were not established until after World War II. For instance, they were strengthened by the 1949 Geneva Conventions, which addressed the lawful treatment of civilians in occupied territories. Furthermore, much of the law behind the principle of "distinction"—differentiation between combatants and civilians—was developed in the decades following the war. These legal protections reflect greater international acceptance in the years after World War II of one of its vital

lessons: the importance of safeguarding civilian lives. Unfortunately, as recent and current conflicts in Iraq, Syria, Sri Lanka, Yemen, Ukraine, and elsewhere indicate, that lesson is frequently forgotten.

NOTES

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6

THE BATTLE OF SEOUL, SEPTEMBER 1950

Tactical Mobility and Urban Combat

FIVE YEARS AFTER the urban battles in Manila and Berlin marked a bloody coda to World War II, the Korean War made clear to military planners that even in the atomic era taking control of major cities was difficult and costly. The battle for Seoul in September 1950 saw United Nations (UN) forces liberate the capital of the Republic of Korea (ROK), or South Korea, from the communist forces of the Democratic People's Republic of Korea (DPRK), or North Korea, that had occupied the city since their invasion in late June 1950. As the largest city and transportation hub, as well as national capital, of South Korea, Seoul had to be retaken as a political and military imperative, but its vast urban sprawl and population of 1.5 million people presented UN, primarily American, forces with severe difficulties. This chapter will discuss the military operations during September 1950 in which UN forces liberated Seoul from North Korean occupation. The focus of the chronological narrative will be on the urban combat and operational activity of the opposing sides. Historical study of the September

1950 battle of Seoul offers scholars and military personnel a fascinating and relevant case study in the challenges of modern urban operations.

Embedded within the larger historical narrative are several areas for analysis that had significant impacts on the battle and are connected to larger themes in urban military operations and modern military history. First, the battle of Seoul was marked by severe problems in command and control among UN forces. Their hybrid military structure, involving multiple allied nations and branches of the American armed forces, led to difficulty in communicating intentions and understanding of implied tasks. Senior UN leaders, most notably the commander of U.S. X Corps, Maj. Gen. Ned Almond, exacerbated these coordination issues by giving poor guidance, frequently interfering with the orders of subordinate commanders, and holding unrealistic expectations. During the battle of Seoul Almond would micromanage to such a degree as to identify targets for individual machine guns while inspecting frontline positions.[1] At other times, Almond was strangely detached from operations, allowing wasteful frontal assaults by U.S. Marine Corps forces on well-entrenched North Korean positions rather than flank them. In the urban environment of Seoul, such difficulties resulted in delays and poor execution of missions by combat units.

A second factor, one that exacerbated command difficulties, was the failure of several senior American commanders to acknowledge the role of terrain in the urban fight for Seoul. In particular, Marine commanders accepted heavy casualties to seize a ridgeline northwest of Seoul that had been heavily fortified by North Korean troops. In an urban battle, with buildings obstructing line of sight, command of high ground on the outskirts provides few advantages. The Marine Corps habit of attacking high ground, strongpoints, and troop concentrations with riflemen led to significant losses among the most experienced and skilled infantry in the UN force. Only slowly, as the battle developed, did Marine commanders begin to rely on firepower and allocate control of that firepower to frontline tactical commanders at the lowest echelon. In the last stages of the battle, tanks proved extremely important to the advance of UN forces and despite their vulnerability in urban areas were vital to the UN's ability to advance rapidly along major roads while minimizing casualties.

KOREA, FALL 1950: THE STRATEGIC SETTING

The North Korean invasion of South Korea, which began on June 25, 1950, achieved rapid success; the lightly armed South Korean forces were steadily pushed back by well-trained North Koreans using tanks and artillery. The fall of Seoul during the initial three days of the North Korean offensive was a major propaganda victory, and subsequent attacks by communist forces pushed South Korean, and later American, defenders steadily southward. Battle lines stabilized in early August, with UN forces holding a defensive line around Pusan, the "Pusan Perimeter," but leaving the North Koreans in control of the overwhelming majority of South Korea. Once reinforced with fresh American troops and substantial air and naval assets, the commander in chief of UN forces, Gen. Douglas A. MacArthur, sought to trap the overextended North Korean

forces by means of an amphibious landing behind the front lines. MacArthur's planned landing at Inchon, the main port of Seoul, would allow UN forces to retake the South Korean capital and cut off North Korean forces farther south at the Pusan Perimeter. Retaking Seoul only ninety days after the initial North Korean invasion would constitute a propaganda counter-coup for UN forces.

Initial planning for Operation Chromite, as the landing at Inchon and the recapture of Seoul were collectively code-named, began in mid-August 1950. Despite the furious battles near Pusan in early August, MacArthur began diverting manpower and equipment into new units for a landing force. On August 26 he created X Corps, a mixed force of U.S. Army, U.S. Marine Corps, and South Korean troops, and assigned Major General Almond, who had been MacArthur's chief of staff, to command it.[2] Almond was a divisive figure in the U.S. Army; his admirers praised him as efficient and aggressive, but others saw him as cold, abrasive, and short-tempered.[3] His personal notes for late September 1950 display a notable lack of respect for fellow officers and a proclivity for pointing out their failures. The primary combat power of X Corps resided in the 1st Marine Division and the U.S. Army 7th Division; two independent field artillery battalions and engineer units brought its total strength to roughly 70,000 personnel. It was politically imperative that a South Korean unit be included in retaking their capital, and accordingly the ROK 1st Marine Regiment was assigned to the 1st Marine Division and the 17th ROK Infantry Regiment to the 7th Division.

Marine Corps units began the X Corps landing at Inchon on September 15 and by September 17, despite several North Korean counterattacks over the following two days, had extended the beachhead as far as the Kimpo airfield. The 7th Division began disembarkation on September 16 and by the 19th was beginning to replace the Marines on the front line. The limited port facilities at Inchon slowed UN logistics; in the first three days only a portion of X Corps and its numerous vehicles and support equipment were off-loaded. This delay allowed North Korean forces to recover from their initial surprise and begin preparing defenses in the Seoul area. The best North Korean soldiers being at Pusan, Seoul garrison units were primarily composed of inexperienced and older men. In total, UN intelligence estimated that roughly 20,000 North Korean troops would be available for the defense of Seoul, and postbattle analysis confirmed this assessment.

DOCTRINE, WEAPONS, ORGANIZATION, AND TACTICS

Urban combat, which would be an important aspect of the first year of the Korean War, was a challenging environment for both UN and North Korean forces, and the battle for Seoul would highlight issues in doctrine, organization and weapons. U.S. Army Field Manual (FM) 31-50, Attack on a Fortified Position and Combat in Towns, published in January 1944, was a tactical guidebook. The manual emphasized that fighting in urban areas was slow and likely to produce high casualties. It recommended "bypassing, isolating or encircling" or, if necessary "making it [i.e., the target town] untenable by incendiary action." The tactic the field manual specified against street barricades, which would fre-

quently be encountered in Seoul, was mortar fire, followed by multiple salvos of smoke rounds, before an attack.[1] A sensitive topic was the problem of looting and scavenging in urban environments, and FM 31-50 recommended that leaders vigorously enforce rules and regulations to ensure their unit remained disciplined and focused.[11] In contrast to the Army, urban operations had not been a significant feature of U.S. Marine Corps operations in World War II.

An even greater problem for UN forces was the ad hoc command structure of the hurriedly organized X Corps. As at Inchon, the critical mass of initial X Corps attacks would be provided by Marine units, some of which had seen action on the Pusan Perimeter. Three Marine regiments, the 1st, 5th, and 7th, had been combined to reconstitute the 1st Marine Division, along with an artillery regiment, a tank battalion, and an ROK marine regiment of roughly 2,800 men. The 5th Marine Regiment had been deployed to the Pusan Perimeter, but both the 1st and 7th Regiments had only recently arrived from the United States. The long voyage to Korea gave the men of the two regiments, many of them reactivated reservists who had seen combat in World War II, time to reacclimate to military life. The Marine Corps was also fortunate to have several experienced combat leaders in the 1st Marine Division. The division commander, Maj. Gen. Oliver P. Smith, had commanded a regiment in the Solomon Islands campaign and been involved in the Peleliu and later Okinawa landings. In contrast to the brash, preening Almond, Smith was quiet, a devout Christian Scientist, and was nicknamed "the Professor" in Marine circles (as well as "O.P.") for his unassuming, intellectual personality.[12] The 1st Marine Regiment was led by Col. "Chesty" Puller, who had become a legend in the Marine Corps during the fight on Guadalcanal, where he was awarded the third of his eventual five Navy Crosses.

The U.S. Army 7th Infantry Division comprised three regiments, but only two, the 31st and 32nd, participated in the Seoul campaign. Before June 1950 the 7th Division had been an understrength occupation unit in Japan, with few noncommissioned officers (NCOs) or officers ready to lead in combat. The division commander, Maj. Gen. David G. Barr, had been a chief of staff of several units during World War II, had worked in the Pentagon G-1 (personnel) division, and had served as the military assistance and advisory commander in China during the late 1940s, but he had not led troops directly in combat since World War I. During the difficult months of July and August, as the North Koreans attempted to break through to Pusan, individual replacements flowing into Japan were assigned to the 7th Division, resulting in combat formations with no sense of collective identity and few World War II veterans to steady them. In addition, U.S. Army units during the Korean War were not composed purely of American personnel. Many of them deployed to Korea with 75 percent or less of their authorized strength, because of recruiting shortfalls, obliging Army commanders to assign South Korean soldiers to bring them up to full strength. Although Korean Augmentation to the U.S. Army (KATUSA) personnel were meant to constitute no more than 20 percent of a unit's strength, during the battle of Seoul nearly one-third of the 7th Infantry Division soldiers would be

Korean.[13] (U.S. Marine Corps units did not include Korean personnel.) One U.S. Army officer wrote home during the voyage to Inchon, "I certainly do wish we had the opportunity for more training. I feel sure we will get some when we arrive. It would be nothing but foolishness to commit us in this state of readiness."[1] No opportunity for training would be available to the 7th Division before the battle of Seoul.

The experience and military skill of North Korean forces near Seoul varied widely. The primary unit in the area was the 18th Division. Additional independent regiments arrived, but they fought without mutual support or substantial coordination.[1] The majority of North Korean soldiers were peasant farmers, conscripted into the military, given a brief military training and heavy indoctrination in communist politics.[1] Throughout the war these raw draftees would prove their bravery under great hardships, but their lack of training resulted in heavy losses when faced with superior UN firepower. Many North Korean commanders had been trained in China or the Soviet Union, some were veterans of World War II or the Chinese Civil War, and many—such as Wol Ki-chan, who led the North Korean 25th Brigade in the fighting northwest of Seoul—were highly aggressive.[1] The extent of Soviet advisory efforts among North Korean forces has never been fully established. U.S. Marine units reported the presence of a tall, fair-complexioned officer directing North Korean units in September 1950, but it does not appear that Soviet military advisors were embedded directly with North Korean units on a regular basis.[1] During the battle of Seoul Stalin would blame his military advisors for failing to reinforce the Inchon–Seoul defenses, but it is unclear whether Soviet advisors actually had any influence over North Korean operational decisions.[1]

Vitally important to the outcome of the battle was the ability of UN forces to use firepower to inflict heavy casualties and reduce fortified strongpoints. American units could rely on excellent personal weapons produced during World War II. An Army infantry regiment had a strength of roughly four thousand soldiers, of whom nearly 1,900 were riflemen armed with the semiautomatic .30-caliber M1 Garand rifle.[2] The M1 Garand had an eight-round clip and delivered accurate and powerful fire. Its only disadvantage was its size—43.5 inches in length and nearly ten pounds in weight—characteristics that created a burden in close-quarters situations. Officers and NCOs, as well as logistics and artillery personnel behind the front lines, were generally armed with M1 carbines. The U.S. Army did not regard submachine guns as useful in infantry operations, and in a regiment fewer than forty soldiers would carry them. Heavier firepower within—that is, organic to—an infantry regiment was available from forty recoilless rifles, an equal number of mortars, both 60-mm and 81-mm models, and 3.5-inch "bazooka" rocket launchers. The most common American artillery piece was the 105-mm M101 howitzer, which fired a forty-pound high-explosive shell over 12,000 yards. The Army still retained the M4 Sherman tank in many units, and the late World War II–era M4E8 model had a high-velocity 76-mm gun, as well as improved suspension and a Ford GAA engine that significantly improved mobility. Some U.S. forces, particularly Marine units, had transi-

tioned to the M26 Pershing tank, which had a 90-mm gun and heavier armor but a weaker engine and transmission. UN forces also had a uniquely valuable asset: one battalion of amphibious landing vehicle track assault craft (LVTs), which could transport forces across the Han River. No bridging equipment or ferries had been brought with X Corps from Japan, and LVTs would be the only way across the Han.[21]

North Korean forces had a wide range of World War II-era weapons and equipment, with which they destroyed weakly armed South Korean forces in the first two months of the war. A common individual weapon was the bolt-action rifle, either a Japanese Arisaka, Chinese Hanyang 88, or Soviet Mosin-Nagant. The North Koreans used large numbers of submachine guns, for suppressive fire at close quarters. The frequently used Soviet PPsh-41 fired a pistol-caliber round that had a range of only 125 to 150 meters, but it had a high rate of fire. At the close ranges characteristic of urban combat and at night, submachine guns gave North Korean infantry a substantial advantage. The North Korean invasion had been spearheaded by an armored force composed of Soviet-built T34/85 tanks, which mounted 85-mm guns, excellent armor, and reliable diesel engines. North Korean forces had been supplied with large numbers of Soviet guns and especially mortars, 61-mm mortars at company level and 80-mm for battalions. North Korean regiments also had their own 120-mm mortars and 76-mm howitzer sections.

In total, both UN and North Korean forces fighting in Seoul were well armed, and both sides had been forced to create military formations through rushed redeployment and amalgamation. Specifically, the X Corps chain of command had not had time for coordination between staff sections, and in any case Major General Almond and General MacArthur seemed more interested in political objectives than military realities. In contrast, North Korean forces could rely on the difficult terrain of the Seoul area to compel UN forces to attack easily defended strongpoints, whose close-range firepower would take a toll on them.

ISOLATING SEOUL, SEPTEMBER 19–25

On September 19, UN commanders began issuing orders to begin the isolation of Seoul by capturing bridges, rail lines, and vital terrain on the outskirts of the city.[22] Seoul presented difficult challenges: hilly terrain, the half-mile-wide Han River, and the widespread destruction of infrastructure inflicted during the South Korean retreat in June and subsequent American bombing. The city of Seoul stretched across the north bank of the Han, in a roughly horseshoe shape because Nam Mountain (Namsan, or South Mountain) rises to a height of 860 feet near the Han in the Itaewon district, limiting development around its wooded hillsides. The majority of government buildings were in the northwest of the city. Two roads led northward from Seoul, one extending northwest to Kaesong, the other due north to Uijongbu. A main highway ran from Inchon about twenty miles to Seoul, passing through the industrial town of Yeongdeungpo on the south bank of the Han. The main north–south rail line on the Korean peninsula ran through Seoul, crossing the Han between Seoul and

Yeongdeungpo before turning south again toward Suwon, but the rail bridge had been destroyed, together with most rolling stock.

Due to the unloading delays at Inchon, the attack on Seoul began on September 20 with only three regiments. X Corps was in a north–south battle line facing east, with the 5th Marine Regiment on the northern end, the 1st Marines in the center, and the Army's 32nd Regiment on the southern flank. The 5th Marines, led by Col. Raymond Murray, moved northward from Kimpo airfield, crossed the Han on LVTs, then turned southeast toward Seoul.[23] Its mission was to cut the main rail line north of Seoul, eliminating one escape route from the city, before attacking a series of sharp ridgelines. A ROK Marine Corps unit was attached but, lacking many of the heavy weapons of American units, played a supporting role.

On September 21, the 5th Marine Regiment attempted to push through high ground known as Yonhui Ridge on the northwest edge of the city. North Korean forces had fortified the main elevation in the area, Hill 296, with machine-gun nests, bunkers, and trenches along a broad front of roughly two and half miles. Any attempt by the 5th Marines to bypass these ridgelines and drive farther east would have opened their flank to counterattack. The initial Marine assault, conducted by one U.S. and one South Korean battalion, made little headway against the heavy fire from well-constructed defenses. Renewed assaults on September 22 and 23 brought little gain. North Korean commanders were continuously reinforced; during the four days of close, back-and-forth fighting, an estimated ten thousand North Korean troops were committed.[2] North Korean commanders were also highly aggressive, frequently counterattacking and moving reinforcements forward at night, forcing Marine forces to fight over the same ground day after day.

CAPTURE OF SEOUL, PHASE 1

Map redrawn from Roy E. Appleman, South to the Naktong, North to the Yalu (Washington, DC: U.S. Army Center of Military History, 1992), map 7

Attacks continued on September 24, Marines now supported by air strikes flown by Marine pilots from Kimpo airfield, less than five miles away. During the course of the battle of Seoul, five Marine aviation squadrons would be located at Kimpo airfield, highly trained close-air-support teams attached to each battalion and regimental headquarters.[2] Close-air-support bombing, strafing, and napalm runs helped wear down North Korean defenses, but close combat was required to carry positions, with Marine Corps M-26 tanks in direct support.[2] Attrition was heavy among the North Korean defenders, but the lead element of the Marine Corps assault on September 24—D Company, 3rd Battalion, 5th Marines—suffered over 90 percent casualties taking Hill 66 in the center of the ridgeline.[2] After capturing Hill 66, Marine Corps forces moved along the ridgeline, finally clearing the western approaches to Seoul by midafternoon on September 24 and thereby opening the way for a drive into urban Seoul.[2]

In the center of the X Corps front, the 1st Marine Regiment faced fighting

through Yeongdeungpo, a sprawling industrial area, to reach the Han River. Defending Yeongdeungpo was the North Korean 87th Regiment, which, before the Marines could move forward on the morning of September 20, attempted with a predawn attack by a battalion-sized force, supported by five T34 tanks, to push the Marines off a series of low hills west of Yeongdeungpo.[2] The Marines dealt with the North Korean attack in several hours of intense fighting, but their own attack had been blunted: the Marines advanced only about a mile on September 20. That afternoon an intensive U.S. artillery barrage and aerial bombardment of Yeongdeungpo began, continuing into the morning of the 21st, paving the way for renewed Marine attacks. Major General Almond, whose rules of engagement allowed a very liberal use of firepower, personally authorized the destruction of Yeongdeungpo.[3] For Marines on the hills west of the town the bombardment was quite a show: "Artillery, heavy mortars, and our Corsairs [F4U fighter-bombers] pummeled Yongdungp'o [sic] that afternoon. The 4.2s [mortars] fired white phosphorous, setting sections of the city ablaze. One of our planes dropped napalm on a block-long fuel dump. Flame and smoke rose a mile and a half into the air."[31] North Korean forces abandoned the city during the night of September 21/22, and on the morning of the 22nd Colonel Puller's 1st Marines pushed forward rapidly and reached the Han.

CAPTURE OF SEOUL, PHASE 2

Map redrawn from Appleman, South to the Naktong, map 7

In the southern sector of the Seoul area, U.S. Army forces made a rapid advance through rural, hilly terrain, cutting communication lines to the south and protecting the flank of the Marine units. The 32nd Infantry Regiment faced light resistance and over the course of seventy-two hours was able to advance roughly ten miles in a sweeping right hook, reaching the southern bank of the Han on September 23.

While the 5th Marine Regiment was fighting through heavy resistance northwest of Seoul, UN forces had been strengthening their position before the final push into the city. On September 21 the third regiment of the 1st Marine Division, the 7th Marines, had begun unloading at Inchon. The same day, Major General Almond had taken formal command of the final phase of Operation Chromite and established X Corps Headquarters ashore at Inchon. Almond was not pleased by the 5th Marines' slow advance northwest of the city. On September 24, Almond changed the boundary lines of his forces, assigning the newly arrived 7th Marines to the north of the Han and ordering the 1st Marine Regiment across the river. This would place all three Marine regiments on the north side of the Han, simplifying command and control for the 1st Marine Division commander, General Smith. This shift would also give the 32nd Regiment of the U.S. Army's 7th Infantry Division the opportunity to attack across the Han in an attempt to seize Namsan, which dominated Seoul.[32] Although Namsan was heavily wooded and could not be used as an artillery position, it was an excellent observation point, with views of all major areas of Seoul and the capital's vital road junctions.

The 32nd Regiment attack began at daybreak on September 25; all three battalions crossed the Han on LVTs, with the Republic of Korea 17th Infantry Regiment followed in the late afternoon.[33] The attack was successful, and UN forces were able to seize Namsan and hold it against a determined North Korean counterattack in the early morning hours of the 26th.[3] By now the capture of roads, rail lines, and bridges had largely isolated Seoul from North Korean reinforcements and supplies, but the road to the northeast, to Uijongbu, was still open and offered a possible escape route.

When the 32nd Regiment moved north into Seoul, maintaining the isolation of the city, specifically from North Korean forces farther south, became a vital concern. On September 23, the U.S. Army 31st Infantry Regiment took up a blocking position thirty miles south of Seoul, at the important city and road junction of Suwon. Three days later, the 31st moved farther south, seizing high ground near Osan but running into strong opposition from North Korean armor. Heavy UN air strikes and artillery fire destroyed fourteen North Korean tanks and inflicted over six hundred casualties, ending any serious threat from the south.[3] The 31st Infantry Regiment would become the first unit of X Corps to link up, near Suwon on September 27, with units of the Eighth Army.

URBAN COMBAT IN DOWNTOWN SEOUL, SEPTEMBER 26–27

At dawn on September 26, U.S. Marines north of the Han River, as well as U.S. Army and South Korean troops, faced the prospect of fighting house to house to eliminate North Korean defenders. Although the number of North Korean soldiers in the city had been severely depleted, thousands remained, supported by tanks and artillery. The North Korean plan envisioned the defense of Seoul as an economy-of-force operation; only roughly half of the troops would oppose UN forces in the Seoul area, providing time for the other half to regroup to the north. Major General Almond, showing his characteristic aggressiveness and hubris—known to descend even to foolhardiness—chose to believe intelligence reports that the majority, not just half, of the North Korean troops were withdrawing north on the road to Uijongbu and ordered an immediate attack. On September 25, before the planned attack, Almond declared Seoul to have been liberated, though UN troops occupied only a portion of the outer suburbs and none of the inner city.[3] Almond's declaration was motivated purely by politics—he wanted to claim Seoul had been liberated exactly ninety days after it had been occupied by North Korea.[3] Soldiers and Marines fighting block by block against heavy resistance failed to appreciate Almond's claim and were shocked to read in Stars and Stripes, when that newspaper reached them, that the city was already secure.[3]

Attacks by the 1st Marine Regiment down the wide boulevards of the western suburbs quickly bogged down; North Korean antitank guns and barricades blocked roads, and snipers kept up a steady harassing fire. The defenders had blocked each intersection with chest-high barricades composed of sandbags, bags of rice, carts, and debris, so as to slow the American advance and allow heavy machine guns and mortars to inflict casualties. Marine rifleman Edward Mar-

tin recalled later, "When we got to the outskirts of Seoul, then it was door to door fighting. The North Koreans had big straw woven bags, and they had all the streets blockaded with these bags full of sand and dirt or whatever—that was to stop vehicles. We went over them with manpower and started knocking them out of their buildings alongside the road. Then, our tanks came along and pushed aside the debris on the streets. It was pretty vicious. Door to door fighting is dirty."[3]

The light construction of the barricades meant that UN forces, particularly American units with tanks or other vehicles, could push through after a brief artillery barrage or strafing run. However, one or two hundred meters farther up the road would be another barricade. North Koreans also laid a large number of mines, but in their haste, the streets being paved, had simply left them amid rubble rather than fully buried, where it was easy for infantry to spot them. While the Marines made progress, they were not able to push forward quickly because of the steady resistance, resulting in a slow, tough slog through the city.

The 5th Marine Regiment ran into similar issues trying to move southward from Hill 296 into the northern suburbs. Many of the government buildings there, dating from the Japanese colonial period, were built of stone and thus ideal as ad hoc defensive positions. Many streets in wealthy neighborhoods were twenty to thirty feet wide and lined on both sides by high stone walls that enclosed courtyard-style homes. The Sodaemun Prison, a massive brick complex from the colonial years on the primary highway into Seoul, constituted a particularly difficult blocking position.

CAPTURE OF SEOUL, PHASE 3

Map redrawn from Lynn Montross and Nicholas A. Canzona, U.S. Marine Operations in Korea, 1950–1953, vol. 2, The Inchon–Seoul Operation (Washington, DC: G-3, Historical Branch, Headquarters U.S. Marine Corps, 1955), 304

The heavy American firepower compounded the ruin of a city that had already suffered ninety days of occupation. One Marine remarked, "The city was dirty. There were animals running wild and junk everywhere. Some battles were fought around barricades formed by trolley cars. Pictures of Stalin hung on some of the buildings. Communist propaganda was all over." [1] Another Marine remarked, "The condition of Seoul is a very moving sight; like a vast trash heap. A few modern buildings, but a huge rubble of a town." [2] Many buildings had been intentionally burned by the North Koreans, adding to the smoke and damage from air and artillery strikes. A Time magazine reporter noted the grimy condition of the city and of the men fighting to control it: "The burned and blackened remains of the boulevard's shops and homes sent clouds of acrid smoke billowing over the city. Buildings still ablaze showered sparks and ashes high into the air to cascade down on red-eyed, soot-faced Marines." [3]

By September 27 the tactics of Marine units steadily progressing through the barricades had evolved. Marine aircraft support would attack a North Korean position and strafe it, while on the ground Marines with machine guns and

mortars established a "base of fire" to protect attacking units. Next, Pershing tanks, working together for protection, would move forward and destroy the barricade with their main armament and treads. Both Army and Marine Corps units used their 3.5-inch "Bazooka" rocket launchers extensively during the street fighting, because it fired an armor-piecing round that could penetrate walls and barricades. One Marine remarked, "In this type of fighting, the 3.5 inch rocket launcher and the 75mm recoilless gun both proved to be excellent assault weapons, and were used by the rifle companies to blast the barricades.... [I]t took a heavy weapon such as a 3.5 inch rocket to bring down a section of building or break through a wall when the enemy refused to be driven out by other means."

By late morning the 1st Marines, which had entered Seoul moving eastward along the rail line and then turned north, had reached the embassy area. The 5th Marine Regiment, also advancing through the northern suburbs, reached the South Korean capital building—"Government House," site of the Korean National Assembly Hall—at 4:10 in the afternoon. Its advance, though slow, had been rapid enough almost to catch North Korean headquarters staff there off guard. The Marines promptly raised the American flag over the building, only to be told to lower it and instead raise the blue flag of the United Nations. The Marine Corps penchant for flag-raising was not lost on Army personnel, one member of Almond's staff remarking, "Ever since that flag-raising picture of Iwo Jima got published, I'm convinced a Marine would rather carry a flag into battle than a weapon."

These two advances broke the back of North Korean resistance in Seoul. On September 28 the Marine units advanced quickly to capture stragglers and to establish positions overlooking the Uijongbu Highway on which North Korean forces fled northward.

In total, the battle of Seoul had cost UN forces over 3,000 casualties: around 550 from the 7th Infantry Division, 250 from ROK forces, and over 1,600, the majority, sustained by U.S. Marine Corps units. Estimates of North Korean losses were 14,000 killed or wounded and another 7,000 taken prisoner.

THE IMPACT ON THE CIVILIAN POPULATION

The liberation of Seoul had been conceived as a political necessity, demonstrating UN resolve and strength after ninety days of retreat. General MacArthur had pushed Almond to advance quickly to allow a formal observance to be held on September 25, but the steady resistance of North Korean forces delayed plans. On the 29th, as UN forces pushed the last North Koreans out of the city, senior officers and political officials returned to Seoul for a tightly scripted, ninety-minute official ceremony. American Marines were pulled from the battle lines to provide security and clear streets between Kimpo Airport and Government House. At noon, MacArthur and South Korean president Syngman Rhee entered the National Assembly chamber. MacArthur stated, "By the grace of a merciful Providence our forces fighting under the standard of that greatest

hope and inspiration of mankind, the United Nations, have liberated this ancient capital city of Korea." [1] As MacArthur spoke, artillery fire continuing in the distance caused glass to fall from the skylights, and after the ceremony the guests departed for Kimpo Airport and a return to safer areas.

As senior leaders celebrated what they hoped would be the beginning of a new phase of the war, the impact of the fighting on the civilian population was an immediate and critical concern. Before the war Seoul had had a population of roughly 1.5 million people, and while many had fled, refugees had streamed in. During the ninety-day occupation, North Korean government and communist Workers Party of Korea officials had attempted to indoctrinate the population and carry out a brutal repression of "class enemies" and supporters of the South Korean government. [2] UN forces encountered bodies from mass executions by North Koreans eliminating anyone they had deemed to be a threat. [3] Impromptu North Korean "People's Courts" had commonly ended with the execution of suspects, their bodies left in the streets as warnings to others.

Also, there were the many South Korean soldiers who, having lost friends and family members, looked to settle scores. Private First Class Jack Wright of the 5th Marines witnessed such an incident: "Just then I passed a burning building. Two South Korean soldiers waited nearby. I turned and saw four North Koreans, three with their hands on their heads and one on all fours coming out of the smoke. These ROKs never batted an eyelash. Once the North Koreans were clear of the building, they gunned them down." For the people of Seoul, the changing fortunes of an increasingly desperate war meant that anyone who had cooperated with the North Korean regime was now a target. One young student recalled being questioned by returned South Korean officials: "We had barely escaped the Communists who were like a pack of wolves. Now the people from my side were the ones shattering bones."

X Corps planners had assumed in early September that food aid would be required and had sent 2,500 tons of rice with the landing force. Another challenge was the interaction between UN forces and local people. Many Marines were World War II veterans, whose battles in the Pacific had been fought largely on islands, with few civilians. In the battle for Seoul, however, Korean civilians had frequently attempted to reach UN lines, often becoming trapped in the middle of firefights on city streets. Non-Korean UN forces were supplied with Korean interpreters, but in the middle of a battle it was often difficult for units spread across several blocks to arrange for translations. Fortunately, however, Seoul had a large educated population, and it was common for at least one member of a large group of civilians to know some English.

ASSESSMENTS AND IMPLICATIONS OF THE BATTLE FOR SEOUL

UN forces during the battle made several questionable decisions at corps level that likely delayed the capture of the city by several days. They had an ideal opportunity to isolate the city by seizing road and rail lines, then move around the Seoul urban area searching for a weak point. Instead, Marine forces northwest

of the city mounted a direct attack on well-defended high ground, a choice that cost the 5th Marines two days and hundreds of casualties. After a day of essentially no progress against heavy resistance, their choice to continue the attack straight into the main line of resistance is difficult to justify. Marine captain, and later four-star general, Robert H. Barrow, who fought in the battle, remarked in an oral history interview that in Marine Corps culture accomplishing a mission as ordered in the time allotted was a matter of great pride. However, Barrow, reflecting on the heavy casualties in this battle concluded that more flexible tactics could "get the mission accomplished[,] with some difference in time [being] a more prudent thing to do." In any case, seizure of the high ground northwest of Seoul at such great cost did not accelerate the UN advance or provide a commanding position over the dense urban terrain.

A more fluid, encircling approach would have confused and misdirected the North Koreans, as well as closed their escape routes. Their superior mobility afforded the 1st Marine Division and the 7th Infantry Division numerous approaches to Seoul, and the Han was not an insurmountable obstacle, however burdensome to cross in amphibious tractors. When UN forces used their maneuverability, such as the 1st Marine Regiment's drive into Seoul from the west and the 32nd Infantry Regiment's seizure of Namsan, they were able to attack along easier terrain and thus with fewer casualties.

Perhaps the greatest defect in UN command and control lay in the personality and behavior of the X Corps commander, Major General Almond, who appears not to have had a clear plan for capturing Seoul other than to do so by the day his superior had fixed for a victory celebration. Almond created tension with his Marine commanders by his aggressive attitude and willingness to disregard the chain of command by personally issuing orders directly to regiments, battalions, sometimes even platoons. [1] Operationally, Almond failed to block roads out of Seoul or to close the highway to Uijongbu until September 28, by which time thousands of North Korean troops had escaped to fight another day. An escape route can be deliberately left open for tactical reasons, tacitly offering the enemy an alternative to urban fighting and thereby reducing friendly casualties in the short term, but there is no evidence that Almond had any such thing in mind. Throughout the battle Almond's directives were rigid, evincing little willingness to adapt to the situation at hand and marked by perpetual admonishments to move faster. Some faults can be attributed to the fact that X Corps had been activated less than one month before the battle of Seoul, but much of the lack of coordination stems from Almond's failure to manage the corps effectively. Later in the war he would push X Corps into an overaggressive, poorly coordinated attack deep into North Korea. When the Chinese responded by attacking southward in November and December 1950 they found formations unsupported and inflicted on them hundreds of casualties.

One tactical lesson of the Seoul fighting arises from the tremendous impact that tanks made in urban warfare. North Korean forces possessed antitank guns and Soviet antitank rifles, but these had limited effect. Only one Marine

tank was lost during the battle of Seoul, when a North Korean soldier tossed a satchel charge onto the engine deck of a Sherman. [2] An additional six tanks, five Pershing tanks and one Sherman, were put out of action by mines and needed significant repairs. [3] American tanks repeatedly provided firepower support that enabled infantry forces to make steady progress, and tanks easily demolished barricades that stopped other vehicles. Use of armored vehicles had the effect of both speeding the advance and lowering UN casualties.

Overall, the UN effort to liberate Seoul can be seen as a successful, albeit muddled, operation. Historians and contemporary military personnel can draw from the battle of Seoul lessons arguing the need to isolate the urban battlefield fully, not just to hinder enemy reinforcements or retreat but also to allow for maneuver around the urban perimeter. In addition, during the fighting, control of firepower and tactical decision-making must be pushed to an extremely low level. The fog of war in urban environments and the difficulty of collecting intelligence in complex terrain make junior leaders the key decisionmakers, and their effective use of firepower and opportunistic advances can maintain momentum.

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FRANK LEITH JONES

7

THE BATTLE OF MOGADISHU

Somalia, October 3–4, 1993

THE CEREMONY ON May 23, 1994, began with the U.S. Marine Band playing American composer Aaron Copland's stirring "Fanfare for the Common Man" in the East Room of the White House. Seated in the audience were senior military officers, members of Congress, civilian dignitaries, and family members of the two men to whom President William Clinton would posthumously present the Medal of Honor. The men had died in a raid to capture top lieutenants of Somali warlord Mohammed Aidid in early October 1993 under the authority of a United Nations Security Council resolution. The Security Council had deemed such a step a necessary response to the deaths of five Pakistani peacekeepers by Aidid's militia, the Somali National Alliance (SNA), in June 1993 and a means to bring peace to the troubled failed state that the international organization had been attempting to foster since April 1992.[1]

A voice announced the arrival of the official party, and the band struck up "Hail to the Chief" as Clinton walked to the front of the room, the widows of two American soldiers, MSgt. Gary Gordon and Sgt. 1st Class Randal Shughart, walking beside him. Carmen Gordon and Stephanie Shughart along with the president stepped up onto the small stage and sat in the chairs reserved for them. In a poignant moment, Brittany Gordon, the three-year-old daughter of the deceased sergeant, ran forward and sat on her mother's lap. After the last note of "Hail to the Chief" faded, all in attendance sat down, and the Army chief of chaplains read verses from the Gospel of John. When he finished, Clinton stood up and moved to the podium. He began to speak, calling the two men, "real American heroes." He continued, "Let there be no doubt about the valor of those who served there [Somalia] and the valor of those who died there." He then described the heroic actions of the two soldiers, how they died attempting to save crew members from a helicopter that had been downed during the raid. The two members of the Joint Special Operations Command had volunteered for the rescue attempt and after gaining permission "jumped into a ferocious firefight," the president explained. "They risked their lives without hesitation." When Clinton finished his address, he walked toward the two women and they stood in response. A military aide read the citations, and the president presented the wooden boxes containing the medals to the two women in turn, Brittany Gordon and her six-year-old brother Ian standing alongside their mother. In the two boxes were the first Medals of Honor to be awarded for post–Vietnam War heroism.[2]

BATTLE OF MOGADISHU

Map redrawn from Richard W. Stewart, The United States Army in Somalia, 1992–1994, CMH Pub 70-81-1 (Washington, DC: U.S. Army Center of Military History, 2002), 20

Yet, the brief ceremony was not simply the coda to the mission; it served as a tangible critique of Clinton's foreign policy. A New York Times/CBS News

poll conducted a month before showed that the public disapproved of his foreign policy, and a restive Congress was complaining that Clinton did not adequately assess American interests in his decision-making. A month later another poll would indicate that public approval of Clinton's handling of foreign policy continued to decline. The world was a more complicated place than he had imagined during his 1992 presidential campaign. Early that May Clinton had defended his policy, asserting, "America cannot solve every problem, and must not become the world's policeman. But," he added, "we have an obligation to join with others to do what we can to relieve the suffering and restore peace." It was this assertion that led to the fierce firefight in Somalia on October 3–4, 1993, when eighteen American soldiers died.[3]

This chapter reexamines the battle of Mogadishu, a combat operation in an urban environment between U.S. military personnel (special operations and conventional forces) and Somali irregulars and armed civilians. It outlines the strategic context in which the operation occurred, as well as the planning and execution of the raid and the often-overlooked rescue effort that saved the surviving U.S. military personnel involved. The research draws on sources such as official histories, declassified after-action reports, personal accounts, and a congressional investigation, as well as secondary sources. The chapter assembles lessons learned from operating in this complex battlespace, lessons that may be useful for the conduct of future urban operations of a similar nature.

STRATEGIC SETTING

The developed world's interest in Somalia, a country about the size of Texas, grew as the nation slid into civil war after the end of the Cold War. The government of Mohamed Siad Barre, a general who seized power in a 1969 military coup and thereafter with his clan appropriated the state's resources to themselves, had been under attack from rebels since the 1980s. Finally, in January 1991, after years of violence and human rights abuses, clan-based militia groups succeeded in ousting Barre and his authoritarian regime. A power vacuum developed in which six militia groups vied for power; the leaders of the two most powerful groups were Gen. Mohamed Farah Aidid and Ali Mahdi Mohamed. Although some governments recognized Mohamed as the new president, he failed to gain control of the country, violence continued, and within a few years Somalia evolved into a "collapsed state"—that is, a "rare and extreme version of a failed state." Other warlords, backed by clan loyalties, took advantage of the absence of central control to establish their own power bases. All this occurred as the country suffered from a drought. International relief organizations attempted to ameliorate the famine that resulted, but it became clear that a massive amount of aid was required to feed the hundreds of thousands of internally displaced persons who were crowding into makeshift camps. Yet, food shipments often did not reach the needy—rival clans, which were fighting over food supplies, seized them for their own use or used them to extort money from relief organizations.

Given the worsening situation, in April 1992, the United Nations Security Coun-

cil (UNSC) passed Resolution 751, which authorized humanitarian relief under the UN Operation in Somalia (UNOSOM), with a small contingent of peacekeepers. However, warlords in the cities and countryside continued looting, hoarding food supplies, and terrorizing relief workers. The UN and relief agencies hired local tribesmen—known as "technical teams"—to guard the shipments. The United States started airlifting food into Somalia's hinterlands in April 1992. Ultimately, however, the anarchic situation led President George H. W. Bush to order U.S. military forces to deploy to Somalia, in Operation Restore Hope. The operation commenced on December 8, 1992, with the UNSC's authorization and under the direction of a unified task force composed of U.S. forces and others from eight countries and commanded by Lt. Gen. Robert B. Johnson, U.S. Marine Corps. This show of force and the activity of Bush's special envoy, Ambassador Robert Oakley, who brokered a cease-fire between Aidid and Mohamed, helped ensure the flow of relief supplies to the interior. The operation proved successful; only occasional incidents of violence occurred. By April 1993, the new president, William Clinton, determined that mass starvation had ended and that he could withdraw U.S. troops, turning the mission over to the United Nations in May.

However, on March 26, 1993, the UN Security Council passed Resolution 814, which expanded the mandate for UNOSOM. The new mission, UNOSOM II, was authorized under Chapter VII of the UN Charter as a peace-enforcement mission to "provide humanitarian and other assistance to the people of Somalia in rehabilitating their political institutions and economy and promoting political settlement and national reconciliation." Specifically, it was to enforce a settlement that included disarmament previously agreed between the warring parties. Turkish lieutenant general Çevik Bir assumed command of UNOSOM II's 18,000 personnel on May 4, with Maj. Gen. Thomas Montgomery, U.S. Army, as his deputy. Montgomery was "dual hatted," as he would also command U.S. Forces in Somalia (USFORSOM), reporting to Marine Corps general Joseph Hoar, commander of U.S. Central Command (USCENTCOM), with overall responsibility for U.S. forces in the East Africa region. This arrangement ensured that U.S. forces remained under the national chain of command leading to the president of the United States, the commander in chief. Montgomery led a U.S. force of more than 17,000 troops, of which 1,100 soldiers were designated a quick-reaction force (QRF) for UNOSOM II in case of emergencies, to include supporting contingency operations, particularly in Mogadishu. This force consisted of a brigade-level headquarters from the 10th Mountain Division, one of its light infantry battalions, an aviation task force, and a forward support battalion.

Within weeks it became apparent that Aidid was going to challenge UNOSOM II, that he viewed its approach to nation-building as a threat to his power. On June 5, his forces killed twenty-four Pakistani soldiers and wounded forty-four others, all UN peacekeepers who had conducted an inspection of five authorized weapons sites that the SNA militia maintained under a previous UN accord. The next day, the UNSC passed Resolution 837 calling for the arrest and deten-

tion for prosecution, trial, and punishment those responsible for the attacks. Subsequently, UNOSOM II began armed patrols in Mogadishu, and the United States deployed four Air Force AC-130 gunships for air strikes. The aircraft flew several sorties, destroying SNA weapons caches in the city and Radio Aidid's transmission capability.[1]

On June 17, the UN Secretary-General's special representative for Somalia, retired U.S. Navy admiral Jonathan Howe, issued a warrant for Aidid's arrest, with a reward of $25,000 for information leading to it. Howe also requested the U.S. QRF to capture the warlord, which Hoar approved after Montgomery asked for authorization. Firefights between UN and U.S. elements and Aidid's Habar Gidir subclan became daily occurrences, and on July 12 the QRF attacked one of Aidid's strongholds with helicopter gunships, killing several of his lieutenants and operatives. After the attack, a Somali crowd killed four Western journalists who had been covering the operation. The urgency of capturing Aidid intensified. He went underground, but his militia remained visible and hostile—a posture tantamount to an SNA "declaration of war" on the United States. On August 8, SNA members detonated a mine under a U.S. military police vehicle in Mogadishu, killing four soldiers. Howe, recognizing that the situation was worsening, repeatedly requested that the Clinton administration assist in capturing Aidid by authorizing the use of U.S. special operations forces (SOF).[11]

Several senior Clinton administration officials supported this request, as did Montgomery, who believed a "surgical strike" was needed to capture Aidid, whose capture in turn he believed would undercut the Somali resistance to the UN mission. The situation in Mogadishu continued to deteriorate while the administration examined options and an intelligence assessment. Then, on August 19, another mine wounded four American soldiers, at which U.S. field commanders requested special operations forces to capture Aidid—this time formally through the unified-command structure to the chairman of Joint Chiefs of Staff as primary military advisor to what was then known as the "national command authority," the president and the secretary of defense. The chairman, Gen. Colin Powell, and Hoar agreed "reluctantly" and so advised Secretary of Defense Les Aspin. Aspin approved and later informed Clinton.[12] In the meantime, in mid-August, Montgomery informally requested that USCENTCOM send a U.S. Army armored cavalry squadron with tanks and Bradley fighting vehicles to Mogadishu to augment his current quick-reaction force. It was, he later stated, the fact that he "was increasingly concerned over [his] inability to get to US or UN forces in extremis that led to [the] request for armor/mech reinforcements." Montgomery followed with a formal request in September. This request too went to Secretary Aspin, who denied it.[13]

U.S. INTELLIGENCE ASSESSMENT

Since December 1992, Joint Special Operations Command (JSOC), responsible for the units of U.S. Special Operations Command (USSOCOM) that conduct high-risk and classified missions, had been periodically monitoring events in

Somalia. By May 1993, JSOC's intelligence and operations directorates were receiving informal requests for information about Somali militia activities in Mogadishu, and there was a noticeable increase in message traffic between U.S. forces serving in UNOSOM II and USFORSOM's higher headquarters.[1]

After Aidid's militia killed the Pakistani peacekeepers on June 5, USCENTCOM formally requested, through the Joint Staff, that U.S. Special Operations Command send a JSOC assessment team to Mogadishu. The purpose was to determine if a direct-action mission to capture Aidid was feasible. The assessment team, comprising the JSOC J2 (staff intelligence officer) and three Navy and Army operators, soon deployed and returned to the United States about two weeks later, having evaluated whether U.S. forces already in Somalia were capable of capturing Aidid and drafted a concept of operations for such a mission. The J2 recognized that a mission of this type required enhanced intelligence capability. Consequently, he coordinated with two intelligence organizations already operating in Mogadishu: the CENTCOM Intelligence Support Element (CISE) and a Central Intelligence Agency (CIA) asset responsible for gathering intelligence from human sources. With upgraded intelligence support, the team concluded, a capture mission was challenging but viable. However, the probability of success would increase—although never be assured—if a special operations unit with sufficient personnel conducted it. Even if so, points of potential failure were evident; however, expectations that the mission would solve the "Aidid problem" overcame reservations. Both General Hoar and the USSOCOM commander, Gen. Wayne Downing, became involved in mission analysis, the latter duly informing the former it was a practicable JSOC mission.[1]

The assessment team's concerns about intelligence support warranted further investigation, so the CENTCOM J2 requested that another assessment team deploy to address whether sufficient intelligence capability existed in Somalia for such a challenging enterprise. This team, intelligence specialists, deployed to Mogadishu in early July and undertook an extensive study of the intelligence requirements for the mission. Its members joined CISE helicopter missions and worked with the CIA operative to become familiar with the target area. The team discovered that there were a number of problems: frequent turnover of CISE personnel; a priority on responding to CENTCOM requirements over those of local commanders; a lack of attention to the link between counterintelligence and human intelligence, as a result of which the quality and validity of Somali sources was suspect; and an overall lack of all-source analysis. The team also, however, watched U.S. conventional forces in UNOSOM II attack an Aidid stronghold; the damage and violence that ensued underscored that a "surgical" special operations mission was indeed more appropriate.[1]

The team's report, provided to the CENTCOM J2, Joint Staff, and U.S. Special Operations Command at the end of July, emphasized that the mission's viability required augmented intelligence support, including imagery, signals intelligence, and JSOC intelligence command and control. Moreover, it highlighted the difficulty of obtaining verifiable intelligence on Aidid's movements; the mission

concept developed by the first team was highly dependent on accurate human intelligence, as well as patience. Likewise, the mission demanded comprehensive planning and intensive rehearsal, because of the urban terrain, the target type, and the enemy's capability.[1]

Aidid's militia attacks continued, and in early August U.S. Special Operations Command ordered JSOC to develop "small," "medium," and "large" force-package options for a potential capture mission as a "solution." The packages differed by the number of personnel and types of equipment employed. For example, one package included AC-130 gunships, but none incorporated armored forces. The assessment process was now complete, and a few days later JSOC received the alert order. It called for deployment of the "small" force package. with additional intelligence assets but no AC-130 gunships (a Joint Staff recommendation). The force was limited to 450 personnel so the U.S. footprint would not be too large.[1]

ON THE GROUND: DEPLOYMENT AND EARLY ACTIONS

Powell notified Hoar and Downing on August 22 that Aspin had authorized the deployment of a joint special operations task force (JSOTF) to Somalia. USSOCOM was to be prepared to provide additional forces if needed. USSOCOM then sent a message deploying the JSOTF to Somalia. Army major general William Garrison from JSOC was its commander, and Hoar would have operational control. The force package was named Task Force Ranger. Its mission: to capture Aidid "and/or other designated others, and turn over captives" to UNOSOM II forces.[1]

Task Force (TF) Ranger deployed its advance and command elements on August 22 and its main body three days later. The task force became operational in Mogadishu on August 26. It consisted of 441 personnel, from the Army's C Squadron, 1st Special Forces Operational Detachment–Delta; Navy SEALs, Naval Special Warfare Development Group/SEAL Team Six; Air Force 24th Special Tactics Squadron combat controllers (air traffic control) and pararescue technicians (combat medics), sourced from across JSOC; B Company, 3rd Battalion, 75th Ranger Regiment; and elements of the 160th Special Operations Aviation Regiment.[2] Major General Garrison and TF Ranger leaders met with Montgomery; the QRF commander, staff counterparts, and UNOSOM logistics-support command personnel provided detailed briefings. Members of the 10th Mountain Division's deployed aviation battalion task force—Task Force 2-25 (i.e., 2nd Battalion, 25th Aviation Regiment) and consisting of OH-58 Kiowa light observation helicopters and AH-1F Cobra attack helicopters—discussed lessons learned from its airborne reconnaissance patrols, Operation Eyes Over Mogadishu. Special operations aviators rode the aviation battalion's helicopters in visualreconnaissance flights over the city. This first phase of the operation, the deployment and coordination with USFORSOM, lasted four days.[21]

TF Ranger established a forward staging base (FSB) at the Mogadishu airport in an abandoned hangar and the airport manager's building and made the

buildings suitable for operations. It also took immediate action to ensure force protection and operational security. The base's proximity to buildings outside the airport, the airport's perimeter road, and the airport's main entrance and passenger terminal made it easily visible. Accordingly, the task force J4 (logistics officer) stacked large shipping containers two-high around most of the perimeter to limit observation. The task force was equally concerned about alerting the SNA, so it randomly launched missions for training and rehearsals, day and night, to confuse observers as to its intent. The Rangers conducted local security patrols, also day and night, to discourage attacks, acquaint themselves with the city, and interact with Somalis.[22]

Intelligence collection for phase two of the operation, the capture of Aidid, began immediately, which required integrating the TF Ranger J2 staff with the other U.S. intelligence assets in the city. The first steps were to task all U.S. assets in Mogadishu for collection, build "precise intelligence cueing and tip-off procedures," and consolidate the reporting and processing of information. TF Ranger did not integrate the CISE fully into its operations, because the latter supported the other U.S. military units in Somalia; nevertheless, the element did provide specific help in imagery interpretation, counterintelligence to supplement human intelligence resources, and tactical signals intelligence analysis. The TF Ranger J2 soon recognized that intelligence gathering would be difficult, not only because of the urban terrain that made communication with sources difficult but also because informants could not be relied on for accurate information. The task force intelligence team learned it could not share intelligence with UNOSOM, because its security was poor and numerous members of Aidid's subclan worked for the organization as local nationals. Thus, Aidid easily collected intelligence against UNOSOM.[23]

THE URBAN TERRAIN: MOGADISHU ("THE MOG")

The ongoing Somali civil war was destroying Mogadishu, Somalia's capital and most populous city, but its infrastructure had been in decline since the 1980s, thanks to untold corruption and mismanagement by both Somali and Italian politicians. As one journalist noted in January 1993, when U.S. troops arrived in the "harbor of Mogadishu, they unknowingly passed by the rotting remains of three boats that had been paid for by an Italian government program to develop the fishing industry. The boats had never been used."[2]

If Mogadishu had been known by some as the "Rome of Africa" in the 1960s, the city of 1.1 million people was in shambles now.[2] One American officer described it as a "horrendous maze of shanty hovels."[2] The narrow streets were often unpaved, potholed, littered with debris, and without streetlights or signs. There were few recognizable buildings, many in disrepair, and numerous tight alleyways that made ground maneuver difficult and limited the number of landing zones for helicopters. It was a lawless city, divided into neighborhoods that various clans controlled. There was a "green line," or demarcation line, that ran inland "more or less parallel to the coast" for about two kilometers and separated the two subclans vying for control of the city: Ali Mahdi's Abgal

and Aidid's Habar Gidir. Other clans, tribes, and various families were situated around these two. Aidid controlled most of central Mogadishu, including the Bekara Market, a large open-air market of alleys and stalls that sold food, garments, and other items but had also become an arms bazaar.[2]

THE ENEMY: AIDID'S MILITIA

The Somali National Alliance militia was an irregular force of several thousands in southern and central Somalia, but it could rely on assistance from every person in Habar Gidir: men, women, and children. In essence, UN and U.S. forces confronted an armed populace. Moreover, Aidid, like his Somali adversaries, brought an organic amphetamine known as "khat" into Mogadishu. People chewed the drug like tobacco, and its narcotic effect lasted for hours. The city was relatively quiet in the morning, but as the day progressed, usually by early afternoon, people began to get high on khat; violent acts began and continued through the night and into the early morning. The users would then sleep it off and start again the next afternoon. It can be assumed that khat was a potent morale builder, making the fighters even more fearless than they might have been and willing to engage in combat with U.S. and UN forces, sometimes within ten or twenty feet.[2]

As one U.S. intelligence officer noted, the SNA militia was not a highly trained enemy, but many of its leaders were experienced former Somali Army officers. Aidid had attended an Italian infantry school, completed a three-year officer's course in the Soviet Union, served as chief of police in Mogadishu, fought in the border war with Ethiopia (1977–78), and had been a military advisor to Barre. Some militia members had military experience or had been trained in Sudan, possibly by Al-Qaeda, and in Iran, which supplied arms. TF Ranger initially underestimated the militia as inferior marksmen, preferring to spray targets with automatic weapons fire; however, as the task force learned, they were "perceptive, canny, and extremely observant." Among the Mogadishu denizens they had an accurate understanding of a person's identity based on clan affiliation and blood ties. U.S. forces could not do the same. Additionally, relationships among members of the same clan made recruitment for intelligence gathering difficult; loyalty to family, subclan, and clan was paramount. Consequently, U.S. forces responsible for counterintelligence operations were uneasy about anything they learned from Somali informants. The militia also knew the terrain well—an advantage—and were capable of using such guerrilla tactics as ambushes and sniping.[2]

With respect to armaments, the AK-47 assault rifle and the RPG-7 (a portable, shoulder-launched, antitank rocket-propelled grenade launcher), both of which were originally manufactured in the Soviet Union, were the SNA's principal weapons. To complicate matters, as one American officer noted, these weapons were present in almost every Somali household. The alliance also had "technicals," in this context pickup trucks each with a heavy machine gun (12.7-mm), a recoilless rifle (90-mm), or an antiaircraft weapon (23-mm) installed in its bed.[3]

The SNA's command-and-control system was primitive but effective. It divided the city into eighteen sectors linked by handheld radios monitored by a duty officer. The SNA had no doctrine but relied on small, loosely organized militia groups and individual members responding to events.[31] Once aware that an assault was occurring, it took two immediate actions. First, small groups probed the perimeter with small-arms fire to determine the size of the force on the ground. Second, they began burning tires as a signal to the armed populace to rally to the target location. As the size of the mob grew, with AK-47s and RPG-7s, it converged on the target or in its area. Another tactic was to have unarmed women approach UN positions and then relay positions to the gunmen; sometimes women were used as shields.[32]

TF RANGER OPERATIONAL CONCEPT

The task force assumed that it would receive notifications about targets, either fixed or mobile, with little warning. Therefore, it developed three operational templates: a ground assault, an air assault from helicopters, and a combined air-ground assault. The task force elements (assault element, security element, and vehicular ground force and aviation assets) rehearsed each template and configured themselves as direct-action forces based on the mission. The assault element consisted of special operators responsible for the capture of targeted personnel, known as "precious cargo," by entering and clearing a building or firing into a vehicle's engine block or windshield, and then "fast-roping" down to it from a helicopter. Fast-roping—or the Fast Rope Insertion and Extraction System (FRIES)—is a technique where a helicopter hovers stationary and lowers a coarse braided rope, approximately two inches in diameter, down which personnel to be inserted slide to the ground. The assault force relied on reconnaissance helicopters to identify the target location and lead the airborne assault force to the landing zone. Landing zones could be the tops of buildings, or vehicles, or in streets, depending on the size of the area and the potential obstacles to the aircraft. After inserting the assault force the helicopters would orbit the target area, providing fire support with snipers and door gunners, whose precision fire could interdict Somalis. Four other helicopters, usually MH-60s (Black Hawks), would serve as gunship support, while two other helicopters, one for search and rescue and one for command and control, would orbit the area.[33]

For most raids, the security element consisted of Rangers from B Company, divided into four "chalks," allocated to each helicopter. The Rangers fast-roped down from helicopters and formed perimeters, called "blocking positions," around the targets to prevent interference with the assault force and to isolate the target area. B Company also provided the vehicular ground force, a platoon-sized element. As soon as the assault force launched, the ground force would move from the airport to the target to reinforce the perimeter and, if needed, extract the assault and security elements.[3]

TF Ranger's headquarters element, which included a joint operations center, organized the intelligence resources to support the direct-action mission by conducting surveillance, finding and tracking the target, and providing force-

protection / aerial-security "overwatch" to warn the assault elements if the SNA was responding.[3]

Targeting Aidid personally proved difficult: the task force was looking for a single individual among a huge population. On September 7, the TF Ranger commander decided that targeting more broadly—the SNA's critical infrastructure, such as Radio Aidid, and Aidid's key subordinates, his six chief lieutenants (so-called Tier 1 targets)—would be a better approach. The concept was that if the personnel or facilities in this expanded target set were captured or destroyed, the SNA's command and control would suffer and Aidid himself might be forced out of hiding.[3]

From August 30 through September 21 the task force carried out missions into Mogadishu for the purpose of capturing Aidid's six chief lieutenants. The first five missions were successfully executed, but they did not capture any of the chief lieutenants nor were they without mishap. On the first mission, for example, the intelligence received from UNOSOM sources proved incorrect: the assault team captured UN humanitarian personnel and their Somali guards. The UN's security manager had believed the area unsafe and ordered them to leave but they had not complied. The incident was reported in the press, to the embarrassment of the task force. Intelligence problems were constant: about three dozen other missions were aborted because of inadequate intelligence.[3]

The missions to apprehend Aidid's lieutenants occurred both day and night and used both helicopters and vehicles to reach the targets. The sixth mission, on September 21, ended in the capture of Osman Atto, Aidid's chief advisor and financier. While it was successful, its experience made clear that Aidid's militia was adapting its responses to the tactics the task force employed. This mission not only proved the SNA's continued willingness to engage with the task force but was the first time its members fired rocket-propelled grenades at U.S. helicopters. Although unsuccessful on this occasion, the militia proved more effective on September 25, when it shot down a UH-60 helicopter supporting UNOSOM II.[3]

As a unilateral force, TF Ranger was unencumbered regarding its discretion to initiate missions.[3] Garrison had complete authority for the task force's mission from the day it arrived in Somalia and was not required to seek approval for any direct-action operation. However, the task force notified Montgomery personally of any imminent "mission launch" that appeared likely, as Garrison did not want the task force's operations to become a touchy subject between the two generals.

THE RAID

TF Ranger launched its seventh raid on October 3, to capture two of Aidid's lieutenants who were meeting in a building on Hawl Wadag Street. The site was across the street from the Olympic Hotel in the "Black Sea" slum area of Mogadishu, near the Bakara Market—the heart of Aidid's territory. At 1:50 the TF Ranger intelligence fusion cell received a report from a CIA case of-

ficer on the ground, based on information from a Somali asset, of a possible meeting of Omar Salad Elmi, Aidid's principal political advisor, and Mohamed Hassan Awale, the minister of interior. The task force provided the building's grid coordinates to the UNOSOM liaison officer, who confirmed there were no nongovernmental organizations in the area. Garrison notified Montgomery of a pending mission, its location and targets. TF Ranger alerted its forces, briefed them, and confirmed target location from a Navy EP-3 (communications collection aircraft) and three TF Ranger reconnaissance helicopters. (These OH-58D Kiowa Warriors, armed scout helicopters, had been temporarily assigned by TF 2-25 to TF Ranger shortly after the task force arrived in Mogadishu. They were equipped with special mast-mounted optics and a forwardlooking infrared, or FLIR, system that could be "down-linked" directly to the TF Ranger Joint Operations Center, or JOC.) [1]

The raid would employ two elements: a helicopter-borne assault force and a blocking force to secure the building's perimeters for force protection, plus a ground convoy (Ground Reaction Force, or GRF) to transport the detainees back to the task force's base. The mission planners in JOC notified the UNOSOM II QRF unit on alert (C Company, Task Force 2nd Battalion, 14th Infantry, 10th Mountain Division—i.e., C/TF 2-14) and, with help from reconnaissance helicopters, scrutinized the ground convoy route for identified roadblocks and possible landmine locations and deconflicted the airspace above the target. [2]

The task organization for the mission consisted of four MH-6 (Little Bird) helicopters for reconnaissance/overwatch; four AH-6Js with four assault personnel each (sixteen in all, constituting the main effort); two MH-60Ls with the remainder of the assault force (twenty-four personnel); four MH-60Ls with the security or blocking element (sixteen personnel in each helicopter, comprising four chalks from two platoons under the command of a Ranger captain, the company commander); an MH-60L for combat search and rescue (carrying three members of the Air Force's 24th Special Tactics Squadron, five of the Army's 1st Special Forces Operational Detachment–Delta's C Squadron, and seven Rangers); and another MH-60L with the mission commanders for command and control of air and ground operations. Other assets in the airspace included the aforementioned OH-58Ds and the EP-3, providing audio and visual feeds of the ground to Garrison in the JOC. [3]

The GRF consisted of the 3rd Platoon and the antitank section of its weapons platoon (fifty-six personnel in total) from B Company, 3rd Battalion, 75th Ranger Regiment, and four SEALs. They travelled in nine High Mobility Multipurpose Wheeled Vehicles (HMMWVs) armed with .50-caliber machine guns and 40-mm MK-19 grenade launchers; and three 5-ton trucks with sandbags for protection. The GRF was led by the Ranger battalion commander. In total, 160 personnel were involved, of whom ninety-two were in the heliborne assault force.

At 3:32 in the afternoon, just two hours and two minutes after receiving the

intelligence, the heliborne assault force launched. The ground convoy departed the staging base at 3:35. The QRF company was put on alert at 3:37. The assault force was at the target in a few minutes, but the helicopter rotor wash blew up dust clouds, causing a "brownout" that initially hampered fast-roping onto the ground, but eventually its members were inserted. By 3:42 they had moved to the target building and in fifteen minutes had captured the two primary targets and twenty-two other individuals in the building. The GRF reached the target at 4:04 and loaded the detainees into its vehicles. Three of the vehicles evacuated a Ranger who had been severely injured fast-roping to the ground. Those vehicles left immediately (at 4:13) for the staging base. Meanwhile, the Ranger blocking force, which had surrounded the building as part of the initial assault, was under constant fire from Somalis. Around 4:20 a volley of Somali rocket-propelled grenades (RPGs) downed an MH-60L (call sign "Super 61") in an alleyway about four blocks from the target. When informed, the assault force moved on foot toward the crash site to secure it and rescue the aircrew, all the while taking small-arms fire. Meanwhile, the GRF too attempted to reach the site, from the north. Its rescue attempt failed; the convoy could not find its way through the maze of streets while under continuous small-arms fire. After losing two 5-ton trucks and taking numerous casualties, it abandoned the attempt and proceeded back to the FSB with the detainees and casualties.

The Rangers in the blocking positions were, simultaneously with the special operators from the assault force, also moving to the crash site, and both forces were under constant attack and taking casualties. An MH-6, taking advantage of its small size and high maneuverability, reached the site first, landing in an alleyway and evacuating two wounded in the middle of a firefight. Super 61's two pilots were dead; the cockpit had collapsed on impact. The JOC informed the QRF that there were problems at the target and it might be needed. In response, the QRF put two scout weapons teams (SWTs) on alert. Each consisted of two OH-58A helicopters (unarmed helicopters for reconnaissance and air-ground integration) and five AH-1F Cobra attack helicopters from 2-25 Aviation. The Ranger blocking teams and special operators reached the crash site on foot and secured it. Also about this time, a fifteen-member search and rescue team fast-roped into the site from a hovering MH-60L. As the last two members of the team were sliding to the ground, enemy fire hit the helicopter, but the pilot managed to keep it stable until they reached the ground. The MH-60L then left for the FSB. The Rangers and special operators, now numbering around one hundred personnel, discovered that the helicopter's two crew chiefs and five wounded Rangers were in the wreckage in an exposed position. The Rangers and pararescue technicians rendering aid pulled Kevlar floorboards from the aircraft for protection from fierce gunfire. They extracted the remaining personnel from the helicopter, minus one of the dead pilots completely trapped by the wreckage, before the entire group, now surrounded by Somali militia and armed civilians, found cover in four buildings to the south and southwest of the crash site. The group established a defensive perimeter and a casualty collection point for the numerous wounded among the rescue force.

Soon after, ground fire hit two more MH-60L helicopters. One, call sign "Super 64," crashed about eight hundred meters south of the first crash site at 4:41; the other, was able to return to base despite a damaged tail rotor, crashing on landing. A team of AH-6s (i.e., two AH-6s) began firing at a large Somali mob approaching Super 64. After making numerous requests for permission and finally receiving it, Master Sergeant Gordon and Sergeant First Class Shugart fast-roped from a MH-60L to the ground and immediately began firing at the mob in an attempt to secure the crew and site. Ultimately, after a lengthy firefight, the mob killed all the soldiers except the copilot, Chief Warrant Officer Michael Durant, whom it took prisoner (he would remain so for eleven days).

At this point, all the friendly forces on the ground at the first crash site were under heavy enemy fire. Darkness was approaching and the American personnel did not have their night-observation devices with them as the mission had planned to take less than fifty minutes, based on prior mission experience. They were pinned down with numerous casualties and had no way to leave the area except by foot, which would only lead to more casualties. They remained in the buildings that afforded cover and marked their positions to prevent fratricide, while two-man teams tried to free the dead pilot with saws, which proved ineffective against the armored cockpit doors. During the remaining daylight and into the night, teams of two AH-6s repeatedly flew firesupport missions, some "danger close" (i.e., friendly ground forces are within close proximity of the target), to thwart Somali attacks, guided by an Air Force combat controller who had to improvise control measures on the spot. A MH-60L resupplied those at the first crash site with medical supplies, water, night-vision goggles, and ammunition; dehydration was a major concern, given the heat and exertion. It too was hit by an RPG but managed to return to the airport. However, there was little risk of those at the crash site being overrun, because of the effective friendly air support and the Somalis' poor tactical discipline.

THE RESCUE

As the GRF convoy moved to the airport, a relief convoy (GRF 2) composed of five HMMWVs and two 5-ton trucks with twenty-seven additional TF Ranger personnel was on its way to the second crash site. This relief force, which encountered roadblocks and heavy fire along its route, met the GRF at the K-4 traffic circle, about a mile from the airport. It loaded some of the casualties from the GRF into its vehicles, and the two convoys moved to the airport. Meanwhile, UNOSOM formed a small QRF with soldiers from C Company, 2nd Battalion, 14th Infantry (Task Force 2-14), and dispatched it with a TF Ranger liaison officer to the second crash site. Near the K-4 traffic circle it too faced heavy fire, which convinced its commander, after more than an hour, to withdraw his small force with support from the two scout weapons teams. It returned to the airport to regroup. Darkness had fallen at 6 p.m., long after the mission had been forecast to end.

Montgomery now activated the UNOSOM reserve, which consisted of A and C Companies of TF 2-14 Infantry and an engineer element to extract the task

force personnel, while B/TF 2-14 (i.e., B Company) was held in reserve. He had consulted previously with the commanders of UNOSOM's Pakistani and Malaysian forces, since the U.S. forces did not have armored vehicles. The Pakistanis had agreed to provide a tank platoon of four M-48 tanks, and the Malaysians would support with two mechanized infantry companies equipped with twenty-four Condor wheeled armored personnel carriers (APCs) to provide both additional firepower and protection for this relief convoy. Neither the Pakistanis nor Malayans had night-vision capability. These units took time to assemble, but they were standing by at Mogadishu's New Port facility with a platoon-sized element of TF Ranger personnel at 6:30. Since this rescue contingency had not been foreseen, a lengthy delay occurred as a plan was completed and coordinated and preparations made. The relief convoy, more than sixty vehicles, departed at 11:23, followed by AH-1 helicopter gunships, command-and-control UH-60s, and OH-58As for reconnaissance. The plan was to extract the Rangers at crash site one and transport them to the Pakistani base at the stadium, which was closer than the airport, but also to secure an open space large enough to accommodate multiple helicopter evacuations of casualties.

Soon after departing, the hastily organized relief convoy, moving east on National Street, reported heavy small-arms fire, slowing its progress; then a roadblock stopped the movement of A Company to the first crash site. Troops dismounted from HMMWVs and two APCs and removed the roadblock at 12:06 in the morning of October 4. The remaining troops then dismounted as well, and A Company moved on foot to the crash site. Two of the APCs carrying 2nd Platoon, A Company, inadvertently turned south off National Street, became separated from the main body, and were ambushed; both were destroyed. The American and Malaysian soldiers they had carried sought cover in nearby buildings to await their own rescue. One element of the convoy continued east on National Street and then north on Shalalawi Street, past the Olympic Hotel, to the first crash site. A second element moved to the second crash site, while a third remained at the street intersection between the two. [1]

Finally, at 1:55 in the morning, the lead elements of A Company broke through the Somalis surrounding the first crash site and linked up with the force there. Intense small-arms and rocket-grenade fire continued. Meanwhile, C Company, which had moved to the second crash site, at 2:27 reported it secure and began searching for the six personnel considered missing in action (MIA). After nearly an hour, the search ended; only traces of blood were found. After destroying the wreckage, this element maneuvered to where the 2nd Platoon and Malaysian soldiers were trapped, after which the consolidated forces began moving to the stadium where the UN Pakistani forces were stationed. [2]

At the first site, the armored personnel carriers arrived and loaded the wounded for exfiltration with the main body of the relief convoy. However, efforts to extricate the pilot's body continued under small-arms fire and rocket-grenade fire. Helicopter gunships provided on-call fire support as targets were identified. At

4:20, RPGs hit two APCs, killing one Malaysian soldier and wounding several Americans. Finally the body of the pilot was removed, allowing the U.S. forces to set charges and destroy the remaining fuselage at 5:30. The remaining personnel started to move by foot to the linkup point with the tanks, encountering continued sporadic fire as they moved but suffering only minor injuries. They arrived at the linkup point as dawn broke and loaded the vehicles for movement to the stadium. However, there were not enough vehicles for fifteen rescued personnel, who accordingly ran approximately six blocks along Shalalawi Street to National Street—what became known as the "Mogadishu Mile." There they met the remainder of the APCs and HMMWVs. At 5:42, the relief convoy began to move, with the Somalis continuing to fire at the vehicles and helicopter gunships at buildings and the street to suppress them. At 6:30, the relief convoy reached the stadium, and medical treatment of the wounded began immediately. What has been called "one of the bloodiest and fiercest urban firefights since the Vietnam War" was over. [3]

Twenty-two targeted Somalis detainees had been captured, but casualties had been heavy. TF Ranger lost sixteen soldiers and fifty-seven wounded, while TF 2-14 suffered two killed and twenty-two wounded. The Malaysians had two fatalities, seven wounded, and the Pakistanis suffered two wounded. There are no accurate figures for Somali casualties, but estimates range from five hundred to 1,500, including casualties among the detainees.

EIGHT CRITICAL LESSONS LEARNED FOR OPERATIONS ON URBAN TERRAIN

Task Force Ranger would not execute another raid, but its October 3–4 mission taught critical lessons about conducting raids and planning for contingencies. Further, the battle of the Mogadishu illustrates the limitations of the ability of special operations forces to achieve strategic outcomes when a particular individual or a group of individuals constitute the center of gravity for irregular forces. The events also underscore several salient points about conducting operations in urban terrain.

LESSON ONE: Success Is a Matter of Perspective. Studies of the TF Ranger mission have deemed it a tactical success in that the assault force captured the intended targets. Garrison said as much in a letter to President Clinton. Crucial to this success were small-unit tactical skills and individual bravery on the part of so many. Nevertheless, eighteen U.S. personnel died, eighty-four were wounded, and four helicopters were destroyed. As Mark Bowden, the foremost chronicler of the battle states, it was a Pyrrhic victory. However, tactical success is not the sole criterion; mission costs must be judged against operational and strategic success and failure. For these two levels of warfare such intangible factors as prestige, legitimacy, international goodwill, and the support of local populations must be considered.

The fact is that the raid was neither an operational nor a strategic success. Two days after the engagement, on October 6, Clinton directed the acting chairman

of the Joint Chiefs of Staff to cease all military operations to capture Aidid and his lieutenants. TF Ranger redeployed to the United States on the 17th. Clinton announced Aspin's resignation as secretary of defense on December 15. Aspin was later to admit his mistake in turning down Montgomery's September 1993 request for tanks and armored vehicles and largely to take the blame for the mission losses. Congress pressured the Clinton administration to end American involvement in UNOSOM II, which it did on March 31, 1994. In sum, the military and domestic political fallout from the raid was substantial.

LESSON TWO: Decapitation Does Not Guarantee "Problem" Resolution. The UN special representative and American policymakers, who did not understand the tactical environment, mistakenly assumed (as did Montgomery) that an economy-of-force decapitation strategy aimed at Aidid's capture or capitulation would lead ultimately to achievement of the political objective—an end to the civil war. This strategy has an analogue in John Warden's five-ring model of strategic warfare, which views the enemy as a system and its leadership (a person or group), the innermost ring or subsystem, as the "vital" center of gravity, because it is the source of guidance and control. In this model, if one can kill or capture its leadership the system, in this case the SNA, will suffer strategic paralysis and collapse. However, Aided—who in any case could not be threatened directly—was not the predominant source of direction, as the events surrounding the engagement revealed. He was not directing the Somalis who attacked the TF Ranger elements. Instead, the population, a subsystem in itself, tied together by kinship through subclan relationships, operated independently of the leadership during the engagement. Moreover, threatening the destruction of Colonel Warden's other three rings—fielded forces, infrastructure, and organic essentials (e.g., electrical power)—was of no value, as they offered no leverage to gain concessions or to pressure the SNA to cease fighting. In the end, UN forces never captured Aidid, the UNSC rescinded its arrest order in November, and months after the attack he was not only still a major factor in Somalia's political future but an essential party in negotiations to end the internal conflict. (He would die, ironically, in 1996 of wounds received in fighting with rivals.)

LESSON THREE: Relative Superiority Is Fleeting. William McRaven points out in his theory of special operations that there exist "certain principles of special operations that can be combined to achieve relative superiority." He defines relative superiority as the "condition that exists when a smaller force gains a decisive advantage over a larger or well defended enemy." He advocates "a simple plan, carefully concealed, realistically rehearsed and executed with surprise, speed and purpose." He notes, however, that any such advantage is ephemeral and subject to friction. [1] While it can be claimed that Task Force Ranger had a simple and realistically rehearsed plan, it could not conceal the plan from Somali observers, undermining surprise. The events of October 3 also underscore the criticality of time: once speed was lost because of friction (i.e., downed helicopters), TF Ranger's direct-action mission became a holding action. The pivotal moment was the shooting down of the helicopters. At that stage the elements on the ground were at the greatest risk and the probability of

mission failure increased. Relative superiority was almost lost; that it was not, entirely, was due to "the intervention of moral factors (courage, intellect, boldness and perseverance)" on the part of the personnel on the ground and those in the air supporting them. [2] As McRaven emphasizes, the longer the engagement lasts, the "more likely [it becomes that] the will of the enemy and chance and uncertainty"—frictions—will influence the outcome. [3] The TF Ranger elements were able to survive until U.S., Pakistani, and Malaysian quick-reaction forces could regain relative superiority needed to complete the mission, but the QRF was not located so that it could, in fact, react quickly. Second, it was not organized or trained for the recovery mission, let alone for operations with other UN units and unfamiliar equipment.

LESSON FOUR: Overreliance on Single-Source Intelligence Reduces Collection Effectiveness and Situational Understanding. TF Ranger and USFORSOM failed to incorporate multiple-discipline "intelligence preparation of the battlefield" (IPB). The results were poor understandings of the enemy's command-and-control architecture, of the complexity of the urban terrain, of the enemy's and civilian population's capability to react and their reaction/response mechanisms, and of the effective use of weapons in a three-dimensional environment. Lastly, the enemy's tactical adaptability was underestimated.

LESSON FIVE: Superior Firepower and Special Tactics, Techniques, and Procedures Are Essential for Force Protection in the Urban Environment. The mission illustrated, when the TF Ranger assault force met stiff resistance, the need for superior firepower and armored vehicles. The use of a light infantry battalion as a QRF reflected underestimation of the adversary's firepower in an urban environment, where maneuver is constrained and force protection is a major factor in mission success. The convoy that rescued TF Ranger personnel consisted of tanks and armored personnel carriers that, if used to advantage, would have provided sufficient force protection and firepower from the outset. However, while tank rounds can eliminate point targets, they may be too destructive to be optimal. Nonetheless, a tank's secondary armament—machine guns—would be very effective. The other issue with respect to tanks is their limited maneuverability in streets; their width can be a limitation in some urban environments. On the other hand, tanks would be effective in punching through street barricades.

Therefore, this engagement and its relief called for a combined-arms task force or team consisting of armor and infantry to attain superior firepower. A mechanized infantry battalion, not a light infantry battalion, would have been the optimal quick-reaction force, as Montgomery had first requested in August and then formally in September 1993. The U.S. military took a step toward this after the battle, sending a tank battalion to Mogadishu to support the 10th Mountain Division battalion. However, since light infantry did not train often with armor, a mechanized infantry battalion, which contains a tank company, would have been the best solution.

LESSON SIX: Aviation Assets Make a Life-or-Death Difference. The helicopter

gunships proved to be a deciding factor in preventing TF Rangers' positions from being overrun (and, as indicated elsewhere, for logistical support). However, as indicated, they did so at significant tactical risk, given their vulnerability to ground fire (small arms and, especially, mass firing of rocket-propelled grenades) both in daylight and at night. As noted, a UH-60 supporting UNOSOM II had been shot down a week earlier, flying at night at 130 knots at rooftop level. The Somalis understood the helicopters to be the American "center of gravity." (It is clear that the SOF aviators recognized the risks and, confident in their own superb flying skills, found them acceptable with respect to achieving mission success.) Additionally, fire support in urban terrain faces unique challenges in concern about collateral damage and, in particular, rules of engagement regarding noncombatants. Relatedly, in this instance the skill of combat controllers in delineating the positions of American personnel so as to prevent fratricide was particularly important. Equally important, the gunships' highly accurate fire during the day and through the night fended off attacks against the surrounded U.S. elements.

LESSON SEVEN: Tactical Success Still Requires the Ability to Communicate. Communication was very difficult, given the multiple networks involved (joint, SOF, conventional, air-to-ground, and multinational) and the fact that the QRF could not communicate with the TF Ranger personnel directly. Moreover, the EP-3 could not communicate directly with ground forces and had to relay through the JOC and command-and-control helicopters flying above the fray. This produced severe delays of critical information, especially with respect to the relief convoy, which as a result often moved in the wrong direction or missed critical turns en route to the hunkered-down TF Ranger elements. Additionally, U.S. communication systems could not always be relied on, because of intervening structures.

LESSON EIGHT: Adrenalin Doesn't Last Forever, So Discipline Must Precede It. Training "at echelon" (i.e., at each separate level of command) ensures disciplined execution when needed most. For example, the successful resupply of ammunition, water (dehydration is a key factor in Somalia's hot and humid environment), and medical supplies proved the value of utility helicopters. Specifically, without the skill (and courage) of helicopter crews to provide this support during the night, an optimal time, it is very unlikely that the U.S. personnel on the ground would have survived. Casualty evacuation was another significant test of discipline. Both the terrain and heavy Somali small-arms fire prevented extraction by helicopter, so the casualties and detainees had to be moved along the streets to the stadium, subjected on the way to withering harassing fire.

Further, equipment discipline proved more important than previously recognized. As one TF Ranger member indicated, the task force was "confident [it] could successfully conduct its mission anywhere in Mogadishu—day or night. It planned almost entirely for success." [1] It was because U.S. personnel expected the raid to succeed in less than fifty minutes that they risked not bringing their night-vision devices (as mentioned), or all of their individual protection equip-

ment or water. Another TF Ranger member states that the decision regarding equipment had been influenced by the facts that the previous six missions had not met significant resistance; this one was to be a daylight raid, and "no mission up until then had lasted longer than 90 minutes." Past experience is not indicative of future success, especially when the mission is unexpectedly extended. As another task force member added, encapsulating the lesson learned, "Consider all contingencies when planning. This will drive smart combat load." [2]

Every engagement and battle is unique. Combatants deal with myriad challenges: the fog of war, friction, ever-changing probabilities, and physical stress and strain. The purposes of gathering and considering lessons learned are to mitigate these factors in future actions; to improve decision-making, personnel performance, and organizational knowledge; and most importantly, to save lives and resources. As retired Army colonel and scholar Andrew Bacevich observes about the events of October 3 and 4, "In retrospect, the lessons to be taken from this small but immensely instructive episode appear obvious. In retrospect, lessons always do." [3] Essentially it is a matter of cognitive, pedagogic, and utilitarian purposes, of learning from the past and applying that knowledge to attain success and avoid disaster at every level of warfare.

NOTES

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FIRST BATTLE OF GROZNY

Map drawn based on pen drawings rendered from battle reports and contemporary city maps

KEITH D. DICKSON

8

GROZNY

Total War in Practice, 1994–2001

THE RUSSIAN INVASION to subdue a Chechen independence movement has deep roots in Russian history. The enmity between Russians and Chechens has endured for generations. Their violent encounters over a century and a half have always been characterized by a particular ruthlessness and savagery. In the last years of the twentieth century and again in the new century, Russian-Chechen conflict rapidly moved to total war. Grozny, as the political and military-operational capital of the separatists, was the center of gravity. The Russians had to conquer the city to justify a claim to victory; the Chechens had to remain in control of the city to justify their assertion of independence.

BACKGROUND

The Chechens have a remarkable hold on the Russian mind. The image of a savage mountain people, resistant to civilization and possessed of near-supernatural abilities to fight in the forests and mountains of their homeland, became ingrained in the popular imagination. The beauty of the land and its imposing mountains held unknown dangers. The relentless battles of conquest and the no-quarter combat that characterized the Russian expansion into the Caucasus in the nineteenth century were idealized by the writings of Lermontov, Pushkin, and Tolstoy. Chechens themselves over the centuries came to be seen as bandits, kidnappers, and brigands answering to an ancient code and a brand of Sufism only they understood.

The strong streak of independence that Chechens demonstrated throughout their interaction with Russians once they became part of the empire, their inability to accept Russification, only further set them apart. The triumph of Soviet power, when it came, reshaped the people of Chechnya. Their ties to their country were weakened as more and more Russians arrived to work in the burgeoning oil industry. During the "Great Patriotic War"—as the Soviets styled (and Russians today) the Eastern Front of World War II—the Chechens were rounded up and deported to camps in Central Asia and Siberia, where they languished in exile until 1957, when they were allowed to return to their homeland after the death of Stalin. There they found the country transformed—almost no physical memory of their prior existence remained; in its place was the soulless fabric of high-Soviet modernism. Once a frontier town, Grozny had become a typical Soviet-style city.

In many ways the Chechens were still exiles in their homeland, outnumbered by the new immigrants from Russia. Chechen society was divided between rural worker and migrant laborers. Chechens scattered throughout the Soviet Union (the USSR) doing seasonal labor, their centuries-old reputation of criminality following them in the suspicious eyes of the Slavs. For their part, the Chechens carried within themselves a deep hostility to Russian political and military authority, bolstered by the belief that Russia would, if given the opportunity, erase the Chechen people from the earth. By 1989, however, the Chechen population had recovered from the experience of exile and, displacing many Russians, who

returned home, became once again the predominant demographic group (including a large number of Sovietized Chechens living in Grozny) and Chechen the dominant language.[1]

Strategically, Chechnya had for Russia only geographic significance. In the late nineteenth century, Chechnya served as the boundary between Slavic Orthodoxy and Islam. It was the gateway that had to be kept shut against the advances of Russia's traditional enemies, the Ottomans and the Persians. It was also the strategic avenue of Russian approach to Georgia and the Black Sea. By the beginning of the twentieth century it was a critical center of oil refining, and later an oil pipeline from Baku to Novorossiysk went through Chechnya. So if the Chechens themselves were of little concern to the Soviet state, Chechnya itself was a cornerstone of Soviet national security.

CHECHENS TAKE ADVANTAGE OF AN OPPORTUNITY

As the Soviet Union collapsed, however, its multiethnic nature came to the forefront. The Soviet façade cast aside, ethnic identity served as a basis on which nationalist aspiration grew within the regional boundaries left over from the Soviet state. In 1991 Georgia, Abkhazia, and South Ossetia became de facto independent states, and Chechnya was soon to follow suit. Boris Yeltsin, president of the newly formed Russian Federation, took advantage of Russian nationalism to strike the final blow to the Soviet political structure. As Russia sought to dismantle the Soviet system to establish its own independence, however, it also strove to preserve the territory of the Russian Federation.

Chechnya, although in many ways antithetic to Yeltsin's appeal to collective Russian-Slavic identity, could not be allowed to exist outside the Russian Federation, largely for the reasons that had led imperial Russia into the Caucasus in the first place. The loss of that strategically important region would leave Russia open to the dangerous influence of the Turks and the Iranians. Economically, the oil refineries and pipelines were a significant part of the federation's global trade. Militarily, the Russian bases that dotted the Caucasus region included a major military and logistics base in Grozny. Retaining Chechnya under Russian control became for Yeltsin, almost by default, a neo-imperial imperative, while also solidifying the claim that the entire territory that had been part of Russia under the Soviet Union was integral to the sovereignty of the prospective post-Soviet Russian state. This assertion of sovereignty had already been directly challenged when, in November 1990, the All-National Congress of Chechen Peoples was organized. It was founded by a coalition representing members of the small Chechen middle class and urban intellectuals. It advocated for sovereignty without any connection to the Russian Federation. Dzkhokhar Dudayev, a former Soviet air force general (the only Chechen to hold that rank after World War II), was selected to lead the congress.

The Crisis Grows

Although secession from the Soviet Union was acceptable, neither Yeltsin nor the Russian elite could allow any of the nineteen non-Russian autonomous republics

in the Russian Federation to seek independence. To accept Chechnya's bid for independence undoubtedly would doom the federation, as it would be a signal for other ethnic nationalities to follow Chechnya's lead. Yet Chechnya represented a danger; as long as it defied Russian authority, Yeltsin appeared weak.

In the wake of the attempted coup against General Secretary Mikhail Gorbachev in August 1991, the Chechen All-National Congress urged demonstrations demanding that the Chechen Supreme Soviet be disbanded and its power transferred to the All-National Congress. Grozny became the focal point of the protests, and a period of turmoil ensued that finally led to armed groups seizing power and replacing the apparatchiks and elevating Dudayev. Although Dudayev had aspirations to lead Chechnya rapidly forward into cosmopolitan freedom and democracy, he ran into the maelstrom of post-Soviet social and political conditions that characterized the fringe regions of the former empire. As the power of Soviet-backed political authorities waned, many other actors poured into the vacuum, willing to use violence to secure their interests. Dudayev tried to harness these dangerous entities by building an anti-Russian nationalist coalition.

Yeltsin tried to rein in the rapidly escalating crisis, but political negotiations failed over the timing of scheduled elections; Dudayev, whose armed groups already controlled much of Grozny, took action on September 30 to eliminate what he called Russian interference in Chechen sovereign affairs.[2] The former Soviet power centers were captured with little resistance. Dudayev announced to a high-level Russian political delegation a few days later that what he described as the Islamic Chechen state was independent of the Russian Federation. In response, the federation's Supreme Soviet declared Dudayev and his armed group outlaws.[3]

Completely ignoring the Russian declaration, Chechnya held elections within a month. Dudayev won a majority of the scattered voting, and on November 1 he declared the independent Chechen Republic. Yeltsin's hand was now forced; he declared a state of emergency in the Chechen republic and ordered MVD (Ministry of Internal Affairs) troops to fly to the Khankala airbase. The Chechen response was immediate. Tens of thousands of people filled the streets, and armed groups set up checkpoints and began fortifying key areas with concrete slabs and heavy construction equipment. It became clear very quickly to Russian leaders that any attempt to move from the airport would lead to a full-scale battle. Lacking support from Gorbachev, Yeltsin ordered a withdrawal. Dudayev had gained valuable breathing space to solidify his position and prepare for a defense. Yeltsin realized the weakness of his position and recognized he would need time to consolidate his control within the federation and develop a plan of action.

What followed was a three-year standoff. Dudayev became increasingly erratic as he tried to cling to power in the face of challenges from a variety of armed groups, mafia power brokers, and opportunists. Criminal enterprises reaped profits by trafficking AK-47 rifles and automatic weapons, counterfeiting, smug-

gling, and kidnapping. Dudayev attempted to build power through fear of an impending Russian invasion, appealing to the Chechen national history of resistance and religion. The message was most appealing to southern Chechen groups, who were strongly anti-Russian. However, much of northern Chechnya was strongly pro-Russian and hostile to Dudayev's increasingly authoritarian approach. Pro- and anti-Dudayev factions battled in the streets of Grozny, and Russian storage depots and garrisons were regularly pillaged for weapons and ammunition. By June 1992 Russian troops had been evacuated from Chechnya, leaving behind enormous amounts of equipment, including tanks, armored personnel carriers, several aircraft, and rocket batteries. Chechnya had rapidly become an armed camp, awash with weapons but under little central control.

The Russian Federation Leadership Takes Action

Yeltsin refused to have any dealings with Dudayev, essentially ignoring the fact that Chechnya was functioning as a sovereign state, however poorly. But as resistance to Dudayev continued to grow within Chechnya and Dudayev himself was showing an inability to provide leadership, Yeltsin saw an opportunity to turn the tables. First, a covert program of Russian support to Chechen opposition groups was initiated, intended to bring about the overthrow of the rebel government, but the attempt was badly botched. A number of Russian soldiers were captured, then released, but only after being used as rich sources of propaganda for Dudayev. Nevertheless, the Russians scored their own propaganda victories by portraying the unrest and violence in Chechnya as a humanrights crisis, one in which ethnic Russians were being driven out of their homes. This theme was followed by claims of atrocities, including reports of Chechens beheading Russians. Russian press reports were characterizing Chechnya as a nation of bandits.

The Decision to Use Force: Russian Assumptions and Realities

By November 1994 Yeltsin had decided to restore Russian control in Chechnya by military force. The members of the Russian Security Council approved this decision, nearly all assuming that rapid military action would topple Dudayev and that order would be restored quickly. It was thinking based on the Soviet experiences in Budapest in 1956 and Prague in 1968—strong shows of force with tanks and mechanized infantry crossing the border and occupying the capital, driving away the opposition and allowing a restoration of regime control. The National Guard that Dudayev commanded was deemed to be little more than armed adventurers posing as soldiers who would offer little resistance when faced with heavy armor. Yeltsin's intent was to use military force to restore order and protect the population—the Chechens were considered to be Russian citizens controlled by hostile elements and therefore not in themselves a threat.

Conditions in Grozny, however, were quite different from what the Russian leadership assumed. Chechens, recognizing that war was imminent, began assembling in the city, looking for combat units and asking for weapons. As Ilyas Akhmadov, a member of the Chechen foreign ministry, later recalled, "For the

first time since the end of my Soviet army career I saw a clear and meaningful path to follow. My military experience could serve an honorable and patriotic purpose. I had something to contribute to a cause I believed in deeply." He joined with Shamil Basayev, a charismatic fighter who had already built a reputation in the Georgia-Abkhazia war and had an experienced core of about forty well-armed men.

The Russian armed forces in the North Caucasus Military District hardly resembled the Soviet army of the Cold War. Pay was haphazard, and many troops lacked adequate housing. Units were manned at less than half strength. Military budgets had been slashed, leaving equipment unready for lack of maintenance and units unable to conduct training. Officers had little understanding of tactics or battle command, and the soldiers themselves, mostly teenage conscripts, had nothing more than rudimentary skills.

The Russian Plan of Attack

The plans for intervention reflected the very poor assumptions of the leadership, including Gen. Pavel Grachev, the minister of defense, who had direct oversight of the operation, and the commander of the North Caucasus Military District, Col. Gen. Aleksei Mityukhin. Three Russian operational elements, or battle groups, with a total of 23,800 troops would converge on Grozny from three directions, isolate the city, and seize control of the key buildings in the city center. The advance would be supported by armed helicopters and air force fighter-bombers. One battle group would launch from Mozdok in the west of North Ossetia with 6,500 men, composed of a mechanized infantry brigade, nine MVD battalions, and a special operations brigade. The second battle group, of four thousand men, also from North Ossetia, would come from Vladikavkaz in the southwest; it comprised mechanized infantry, airborne infantry, and five MVD battalions. The third battle group would advance from the east out of Kizlyar, Dagestan, with four thousand men, a combination of mechanized infantry and MVD units. It was expected that once these battle groups converged on Grozny, Dudayev and his National Guard would retreat south into the mountains rather than fight, leaving the city in Russian hands.[1]

Approaching from North Ossetia and Dagestan, these forces would encounter a broad flat plain, largely agricultural. The giant forest that had stood there, once a sanctuary for Chechen fighters, had been systematically destroyed during the imperial advance and during collectivization. The Terek River offers no significant barrier. The Sunzha River meanders south to north through Grozny before turning generally eastward to join the Terek and marks the beginning of the southern uplands just south of Grozny, a series of foothills that rise gradually into the spectacular Caucasus mountain range. This area remains heavily wooded, with deep valleys and isolated villages. For a mechanized column, the roads in northern Chechnya are adequate, allowing a rapid advance. Once past Grozny, however, the roads are poor, and the broken terrain limits maneuver. Thus, the plan required a well-coordinated, simultaneous advance that would concentrate overwhelming combat power at the center of gravity, Grozny, mini-

mizing the opportunity for any resistance to be organized and allowing for rapid movement into the city center to control the presidential palace and the Sunzha River crossings.

Flaws in the Plan

Several problems existed that would shape the battle to come. First, the battle groups were largely ad hoc, troops and equipment collected from all over the North Caucasus Military District to bring units to full strength. They had had no opportunity to train together, especially infantry and MVD units, so coordination and integration even within the groups would be difficult at best. There was almost no knowledge of Chechen capabilities, although for nearly three years detailed information could have been collected on Chechen fighting tactics. Finally, no one anticipated any restrictions on movement into and through Chechen territory on the way to Grozny. The Russians appeared to be operating under the assumption that Chechnya was part of the Russian Federation and that accordingly any military contingent would have unlimited access and automatic control of the roadways, completely ignoring the obvious fact that Chechnya had declared its sovereignty and considered itself no longer a part of the federation. As a result, the battle groups had made no contingency plans for encounters with armed groups prior to arrival outside of Grozny.[11]

Grozny itself can be approached along four major roads: from the northeast, the east, the south, and the west. All, according to the military maps, converged at the city center. A quick study of the military maps, however, would reveal that these main highways quickly become constricted in the city itself. The two main east–west streets, Prospekt Lenina and Sherapova Street, crossed the Sunzha River. Here, on the west side, were the parliament building and the presidential palace, the presumed location of the Chechen leadership. These streets proceeded west to Dynamo Stadium, where two other streets—Prospekt Pobedi and Karl Marx Street—intersected. These, in turn, intersected perpendicularly with north-oriented Mayakovskaya Street, which then intersected with the east–west Staropromyslovskoe Shosse (highway). Access into Grozny from the north would come down Mayakovskaya. From the northeast, Pervomayskaya and Lermontova Streets provided access. Griboed Street intersected with Pervomayskaya Street near the stadium. Behind Pervomayskaya Street was Lenin Park, which was near the main rail line running south and east into the Factory District, where the main train station was located. Any access to the center of Grozny from the west would have to use Pervomayskaya Street, moving north then west. Likewise, any advance into the city from the north or northeast would be dependent on three main avenues—Mayakovskaya and Pervomayskaya Streets and Staropromyslovskoe Shosse—and the smaller, parallel, Lermontova Street. From the east, Sherpova Street and Prospekt Lenina gave the most direct access to the center of the city. Between Dynamo Stadium and the presidential palace was a mixture of standard high-rise Soviet apartment buildings, multistory commercial buildings, and older structures. The Lenin District in the northern part of the city was mostly suburban housing, while the

southern part of the city contained the Factory District, with large industrial complexes, storage buildings, and mixed commercial-residential buildings.

Thus, using these main city thoroughfares the Russian columns could easily converge on the parliament building. The population of about 400,000 people (200,000 of them ethnic Russians) would be overawed by the display of military might; bandit gangs would then be disarmed, and the MVD would reestablish control.[12]

Such a plan required several important preconditions: sufficient maps to guide unit commanders into an unfamiliar city; extensive rehearsals of convoy movement once in the city; command and control procedures for coordinating arrival and assembly at the parliament building; and rules of engagement in case of hostile intent or action. None of these were addressed. Few, if any, maps were available to tactical units; no rules of engagement were considered; units would arrive according to a general timetable; no arrangements were made for maintenance stops or resupply; and no security or reconnaissance detachments were deployed. The Russians were making what they thought was an administrative march. Instead, they were headed into hostile territory, driving into a city defended by several thousand fighters who were eager to do battle with the Russian invaders in defense of Chechen independence.

THE PLAN ENCOUNTERS REALITY

Almost immediately the plan began to unravel. As the battle groups moved through Dagestan, Ossetia, and Ingushetia in mid-December, they were met by angry crowds blocking traffic and demanding that the units return to base. Villagers blockaded roads, stopping the columns, and calling on the soldiers to abandon their mission. A number of Russian troops were taken hostage, and there were incidents of soldiers shooting at civilians. Also in the mix were Chechen fighters following along with the columns. Some, wearing Russian military uniforms, approached and killed individual soldiers. Officers had no instructions on how to react to these spontaneous demonstrations, so many turned to negotiations to try to continue forward. Villagers sabotaged vehicles, stole weapons and equipment, and generally crippled the soldiers' morale. The entire population seemed against them, and yet there seemed to be no justification for the use of force against these people who were officially declared to be Russian citizens. Instead of a few days of largely administrative movement, it took two weeks for the individual battle groups to reach Grozny, deep in clearly hostile territory.[13]

Dudayev organized his limited number of fighters into defensive belts. In the suburbs ten to twenty kilometers from the city center were hasty defenses of artillery, tanks, and armored personnel carriers set up to delay the Russian advance. Many of these fighters were Soviet Army veterans who understood tactics. A second belt was deployed where the main highways became city streets. A third belt was concentrated around the city center, protecting the presidential palace. The first belt engaged Russian forces at a distance, usu-

ally with harassing artillery fire. The extremely slow Russian response to these initial contacts reflected the shock that the city's population was not overawed by the approaching Russian forces. No one had anticipated a fight for the city; now the situation became more and more uncertain. Division and regimental commanders had to respond quickly and reorganize their units for combat. Few of these leaders were capable of doing so. The initial response was a clumsy attempt to suppress enemy guns by uncoordinated air strikes and (largely inaccurate) indirect artillery fire, a tactic that led to widespread destruction of residences and civilian casualties.

The reliance on indirect fire quickly revealed serious weaknesses in Russian combat units. The T-72 tanks were in poor mechanical condition; the drivers, with little training, had difficulty controlling them, let alone employing them in a tactical formation for maneuver. The infantrymen, such as they were, had no skills in tactical movement to clear enemy positions. Command and control broke down almost immediately; confusion over rules of engagement created chaos in frontline units. So too with the supply system: food and fuel were limited, and troops had few tents or shelters for the cold December weather. Units began to dig in, an indication that there was little motivation among the leaders to engage the enemy.[1] Nevertheless, by December 25, preceded by air bombardment and a slow withdrawal of Chechen forces, the Russians were on the outskirts of Grozny. Discipline was already breaking down: many soldiers began to fire on civilians and engage in looting.

Disaster in the Streets

Yeltsin became increasingly impatient with the slow pace of operations and demanded that the battle groups seize the initiative and end the operation quickly. General Grachev personally took charge, sacking the commander of the North Caucasus Military District and putting Lt. Gen. Anatoliy Kvashnin from the General Staff in command of Russian forces in Chechnya. A new plan outlined a multipronged advance into the city, from the east, west, and north simultaneously, led by armored columns and supported by air strikes and artillery. On December 31 the attack began and almost immediately fell apart. The east and west columns ran into heavy resistance and halted in place. Only the northern element was able to advance, in long single columns down Mayakovskaya and Pervomayskaya Streets and Staropromyslovskoe Shosse. The northern element was able to move largely because it was advancing through the predominantly Russian part of the city, which had largely been spared the indiscriminate air bombardment that had created rubble that hampered movement through the streets elsewhere.

As the northern group's units moved farther into the city, the streets became increasingly narrow, making it impossible to turn around. Tanks, without infantry support, crossed intersections blindly, ruined apartment buildings towering over them. Infantry remained inside their vehicles, either too afraid or too inexperienced in urban combat to know they were prime targets for Chechen fighters armed with the RPG-7 antitank weapon, firing rocket-propelled grenades that

were devastatingly effective at short ranges. The lead tank and last vehicle in a column would be hit with a volley of antitank fire and grenades, usually from the flanks to take advantage of the vehicles' blind spots, while other ambushers would fire RPGs and machine guns from multistory buildings, methodically destroying trapped vehicles and killing troops attempting to escape the ambush. Chechens would then swarm the vehicles, seeking trophies—individual weapons and especially the mounted 12.7-mm heavy machine guns.[1]

Some units, attempting to avoid fire, would move down side streets, where they became disoriented and struggled to regain contact with friendly units. Isolated units making their way toward the city center were cut off and surrounded by Chechen fighters, who demanded that they surrender. Vehicles taking fire would halt to engage the enemy, themselves easy targets for fighters firing from the upper stories of buildings. Snipers were especially effective in killing or wounding ground troops and especially leaders. Soldiers would be wounded specifically so that soldiers coming to their aid could also be shot. In the maelstrom of combat, infantry and tanks became separated and easily isolated. The 131 Brigade in its advance lost twenty of its twentysix tanks and 102 of its 120 armored personnel carriers. The brigade was nearly obliterated, with over a thousand dead and seventy-four captured; the 105 soldiers who remained, most of them wounded, fought for survival near the railway station. A tank unit sent to their relief was completely destroyed. By January 2, the Russian attack had culminated. Units that had advanced and stopped were now holding precarious, improvised defensive positions scattered between Prospekt Pobedi and the stadium, while others were holding points along Pervomayskaya Street and in several buildings near the presidential palace. Even more dismaying were the numerous appeals of Russian prisoners of war to their comrades on local television and radio to cease hostilities.[1]

The Russians believed they were fighting 15,000–20,000 Chechens; in reality they were opposed by no more than four thousand. What made them effective was familiarity with the city, extensive planning, and high morale. The Chechens, using cellphones, operated in "mobile, self-sufficient groups" of five to twenty, each group armed with RPG launchers, a machine gun, hand grenades, and rifles. Snipers covered open areas and supported the ambushers. The Chechens learned quickly to launch their RPGs from positions on which Russian tanks or armored personnel carriers could not bring their weapons to bear. With each successful attack they became more fearless, even reckless, as it became clear that the Russian soldiers had no fight in them.[1]

One Russian combat correspondent noted that the Chechen fighters did not look like professional military men: "They wander around Grozny without any apparent logic or order, wearing very improbable combat attire. Fifteen-year-old boys … carrying grenade launchers. Old men … carrying pistols. Young men in white camouflage smocks carrying rifles.… In addition to the frontline detachments, the city is providing itself with its own system of self-defense.… These groups have their own assault riflemen, snipers, and grenade throwers."[1]

Ilyas Akhmadov, joining the battle as a novice with Basayev's fighters, recalls being overawed by the Russian armored column advancing down Staropromyslovskoe Shosse. He described the battle as "total chaos." "While I was in the midst of urban warfare," he wrote, "I couldn't understand what was happening on the next block, or sometimes, in the next building."[1] There was no central control or military discipline; everything seemed to be ad hoc, individual fighters or groups simply following the battle noise. If one did not have a weapon, Akhmadov recalled, "you borrow a weapon, kill someone and take their weapon, or you take it from a vehicle that has been incapacitated."[2]

THE RUSSIAN RESPONSE

Stunned by the fierce resistance that seemingly came from every direction but finally confronting the reality that the Chechens were going to fight for every part of the city, the Russian leadership turned to the model of the battle of Berlin. Hitler's capital city had been captured street by street, and so would Grozny. The Russians would resort to 1945 tactics as well: small, mobile units, backed by artillery, often in direct-fire mode, and supported by tanks blasting apart the city block by block until all resistance was crushed.

These new tactics predominated the renewed Russian assault on Grozny. A company assaulted a building, then, having captured it, left behind a section for security and to prevent the Chechen fighters from returning. So, as the assault units advanced they grew smaller and smaller until eventually they were unable to advance farther and were subjected to concentrated counterattacks. Replacement equipment and supplies arrived by air, along with reinforcements of marine infantry, special operations forces, and MVD units, bringing the total number of troops to 58,000. Defensive positions were consolidated and improved, and units were reorganized to make the most of their greatest advantage: heavy firepower, used less for support of maneuver units and more for shock effect, to break the will and morale of the enemy. Artillery rained down on the city at a rate, reportedly, of four thousand rounds an hour. Eyewitnesses of the subsequent attacks reported that the high-explosive fragmentation rounds were being used not to destroy military targets but to kill as many people as possible.[21]

Once Russian troops made contact they employed artillery without restriction at ranges of 150 to 200 meters to destroy defensive positions and suppress resistance. Beginning on January 7 the Russians unleashed on the center of Grozny a storm of artillery and air strikes that continued day and night for three weeks. Although nominally intended to isolate the Sunzha River bridges and keep Chechen fighters from crossing to the city center, this heavy firepower was in fact employed indiscriminately. The safety of civilians in Grozny, like that of the German civilians in Berlin decades before, was not considered—it is estimated that between 25,000 and 29,000 civilians were killed, a civilian death toll equal to that of the bombing of Dresden in 1945.[22]

The area south of the Sunzha River near Minutka Square was still under the control of the Chechens, and sniper fire posed a constant menace. Small mo-

bile groups of Chechen fighters—usually a sniper, a machine gunner, and a man equipped with a grenade launcher—hid out in the basements of destroyed buildings where they were very hard to locate and dislodge without serious casualties. Russian artillery methodically bombarded the southern part of the city, and frontline units entrenched themselves in the rubble, using the debris of the ruined houses for firewood and shelter.[23]

Over the next few weeks Russian battle groups continued the advance from three directions, systematically capturing the city block by block. The Chechens could not sustain strong resistance in the face of such concentrated firepower, and their casualties were heavy. The presidential palace, symbol of Dudayev's resistance, came under increasingly heavy bombardment. Russian units closed in on the area and took the building under fire. Dudayev and his associates remained in the building until finally compelled to cross the Sunzha River with the surviving fighters and move into east Grozny to regroup. On January 20, Russian forces occupied the building and raised the Russian flag.[2] The Russian political leadership immediately took hold of this symbolic moment to declare that combat operations had been concluded and that the MVD would now take control and maintain "constitutional order." Russian army reinforcements continued to arrive to surround the city to cut off escape routes. News reports, however, indicated that airborne assault troops and marines were still operating in the central part of the city. Chechen fighters would continue to resist into February. The Russian army had at that point accomplished the mission of taking Grozny, but at the cost of four thousand dead—a depressingly high number. Both sides were guilty of violations of the laws of war: brutality and extreme cruelty had been commonplace.[2]

THE SHOCK OF WAR

Russian media had uncensored access to the Chechen battlefield; both newspapers and television reports broadcast the "ground truth," in contrast to the official pronouncements from Moscow. Photos of bodies of Russian troops burned beyond recognition shocked the public and led to widespread condemnation of Yeltsin's war. Videos surfaced of Chechens beheading Russian soldiers. Russian units in the confusion of battle fired on each other and were often hit by friendly airstrikes, helicopter gunship runs, and artillery. Chechen fighters often deliberately mixed with civilians to provoke Russian troops to fire and so stoke popular outrage and international condemnation. The city of Grozny was reduced to rubble; it looked as if it had suffered a nuclear attack. Dudayev had escaped, however, and, making use of a powerful transmitter, appeared periodically on television to rekindle the spirit of resistance.[2]

Pacification continued into the spring. Russian military units pursued Chechen fighters into the southern mountain valleys, destroying any village or town that offered resistance. Yet although Grozny was in Russian hands and Moscow's claim that the Chechens were Russian citizens was heavily promoted in official statements, nothing had been resolved. The Chechen desire for independence was stronger than ever, with many now mourning lost relatives and seeking an

opportunity for revenge. Yeltsin's credibility had been seriously compromised. Despite his numerous claims that he had closely followed all the action in Chechnya and had ordered no attacks on civilian targets in Grozny, the final stages of the battle were known to have been marked by air strikes and rocket and artillery fire throughout the city. He now faced opposition at home and increasing revulsion and criticism from a global audience.[2]

Although for the Russian leadership it was becoming increasingly clear that continuing military operations did not justify the political cost, Russian forces continued to press the Chechen fighters. Dudayev was killed in a missile strike in April 1996, and leadership of the resistance fell to Aslan Maskadov, who had served under Dudayev as chief of staff of the Chechen Republic's military forces and had directed the defense of Grozny.

A NEW DIRECTION: SURPRISE ASSAULT

With the tide clearly turning against the Chechens, Maskadov, an astute observer of Russian politics, decided that a highly visible and symbolic act was needed to shock the Russians into serious negotiations. Assembling various warlords into a coalition, Maskadov outlined to them a daring plan to take back Grozny. As long as the fighting was limited to the remote mountain valleys, he warned, the world and the Russian public would soon lose interest, giving Yeltsin the opportunity to pursue the ultimate goal of crushing the Chechens. The only way to keep the war in the forefront of the public eye was to make the capital city the primary battlefield. The Russians were actually assisting the plan, he added. As some combat units moved deeper into the south, others were being rotated back to Russia, part of Yeltsin's effort to demonstrate that large-scale military operations were at an end. This left Grozny with only a minimal troop presence.

On August 6, about 1,500 Chechen fighters infiltrated the city. All the existing Russian outposts had been identified and were now targeted to prevent them from responding to the main assault. Blocking positions were established on the northern, western, and southern main roads into the city to cut off outside reinforcements. The main body moved into position to attack the nerve center of the Russian-backed government, sealing off the government buildings in the city center, especially the Ministry of Defense and Ministry of Internal Security, and controlling Theater Square and the train station. The MVD troops were caught unawares and made a feeble response as additional Chechen fighters poured into the city and the individual outposts around the city were neutralized. All this was especially embarrassing for Yeltsin, who was being sworn in as Russian Federation president even as Grozny was reported to be largely under the control of "bandits armed to the teeth."[2] The problem was compounded for the political leadership by the psychological effect of the attack. One reporter observed that "the federal authorities have shown themselves incapable not only of defending a city that had long been under their control but even of providing the normal kinds of information about their operations."[2]

Reports indicated that about 3,500 Chechen fighters were in Grozny. Several hundred fighters were reported moving on the Severny Airport, the main base of Russian forces. Chechen fighters in the city dug in and prepared to defend. The Russians were again in the same circumstances as before, having to fight their way into the city center against a well-armed and organized resistance. And again, Russian troops were unprepared for the rigors of urban combat. These replacement troops had received no training, nor had the hard lessons of the previous battle of Grozny been passed on. Mechanized units, still moved in column, and were ambushed and isolated. The 276th Regiment began an attack toward the city center and in two days of fighting lost 150 killed and 300 wounded out of its original strength of 900.[3]

The Russian Counterattack

On August 20, the commander of the Russian forces present issued an ultimatum ordering all fighters out of the city; otherwise, he would order air and missile attacks. As panicked civilians desperately fled the city, the threatened devastating attacks began. Backed by this firepower, Russians fought their way into the city, suffering heavy casualties. By the time the battle ended on August 22—with not a retreat by the Chechen fighters but a negotiated cease-fire—the Russians had lost 500 dead and over 1,500 wounded. Over one hundred tanks and armored vehicles had been destroyed, along with more than half a dozen helicopters. Civilian dead were estimated at 2,000, but more than 220,000 former residents were now refugees.[31]

Russia now backed away, cutting its losses and leaving a destroyed and battered region to its own devices. By August 31 Russian troops had left Grozny, and in May 1997 Maskhadov and Yeltsin met in Moscow to sign a formal treaty, in which the Russian Federation recognized the Chechen Republic of Ichkeria. In the first free election of the new republic, Maskhadov was elected president. His desire was to rebuild Chechnya and establish favorable diplomatic and economic ties with Moscow. The new Chechen parliament shared this desire to establish good relations with Russia while promoting peace, independence, and democratic norms.[32]

A Bitter Reckoning for the Russian Military

The Russian military, however, was resentful. Humiliated by defeat and the loss of 7,500 soldiers in the campaign, senior military leaders, directed by the chief of the General Staff, Anatoliy Kvashnin (who had commanded Russian forces in the Grozny operation), conducted an analysis of the defeat and began preparations for a second war. The North Caucasus Military District held a number of extensive exercises that largely served as rehearsals for a future invasion. By March 1999, detailed plans were being finalized. Politically, Moscow had ignored the agreement's terms intended to support the reconstruction of Chechnya. Russian leaders instead attempted to isolate Maskhdov and established what amounted to a blockade of Chechnya. Chechens were continually branded in official media as "bandits."[33]

The General Staff's analysis focused on the lack of preparation of the forces, in terms of poor unit training, the assembly of ad hoc formations, and the absence of coordination between MVD and regular army units. Training was modified to involve as many units of the various security ministries as possible with regular units and to include air-ground coordination. Interestingly, and more broadly, the Russian leadership derived only one strategic lesson from the first war: avoid urban combat. Thus, little time was invested in examining the tactics and techniques of urban operations, and consequently the hard-won lessons of Grozny were lost.[3]

THE EMERGENCE OF VLADIMIR PUTIN AS CHECHNYA TEETERS TOWARD ANARCHY

In the meantime, Chechnya, its economy destroyed and its population traumatized by war, was descending into anarchy. It was torn between warlords, many of whom (including Shamil Basayev) now embraced radical Salafist Islamic concepts of Wahhabism and sought to create a caliphate in Chechnya, supported by a number of foreign fighters who directed training and indoctrination.[3] In 1999, several events created conditions that allowed Russia to launch a second attack on Chechnya. In February, Maskhadov took desperate steps to keep the country together, disbanding parliament and allowing the formal introduction of shari'a law, which to many indicated that Chechnya had become a theocracy. In August 1999, about two thousand volunteers from Chechnya led by Basayev engaged in a jihad to liberate Dagestan (between Chechnya and the Caspian Sea) from Russian control. After capturing a number of villages, the fighters declared an Islamic republic.

This was a direct threat to Russian security—Chechnya was no longer a troublesome, but isolated, problem. It was now exporting a jihad that could spread throughout the Muslim region of the Caucasus. Yeltsin turned to his new prime minister, Vladimir Putin, an obscure figure who had previously served as the head of the Federal Security Service (FSB). The North Caucasus Military District was fully mobilized, and within days ten thousand Russian troops were moving against the insurgents, who had by now dug in to defend the area they occupied. Putin arrived in Dagestan as Russian forces unleashed air attacks using fuel-air explosives and followed with ground assaults. A counterinvasion by Basayev was thrown back, and insurgent targets in Chechnya were attacked. Although Maskhadov himself condemned the Dagestan invasion, Putin clearly no longer considered Yeltsin's peace arrangement with Chechnya as valid.[3]

There followed a series of terror attacks in Dagestan, Moscow, and Volgodonsk (on the Don River between Rostov-on-Don and Volgograd) that killed a total of three hundred people. The attacks created a sense of crisis that grew into near mass hysteria in the Russian Federation, and they were immediately blamed on the Chechens. No Chechens, in fact, were ever implicated (although a number of Dagestanis and representatives of other ethnic groups were eventually arrested). Nevertheless, Putin made sure that the Russian public focused on Chechens as the threat—they were bandits and terrorists, and Chechnya itself had become a

terrorist state. In September 1999 Putin declared that Russia was under attack and was defending itself. "We must throw off all syndromes," he announced, "including the guilt syndrome." His vow to deal with the Chechen terrorists wherever they could be found galvanized the Russian military and security forces to prepare for an all-out effort to eliminate the threat permanently.[3] Putin was able to translate this fear into a victory in the presidential elections of 2000.

PUTIN'S WAR

Putin informed Maskhadov that Russia was willing to use force to destroy Chechen bandits and their camps and infrastructure. On September 22, the Russians initiated an air campaign against key infrastructure, cities, and villages, creating masses of refugees. On October 1 Putin declared that Russia no longer recognized Maskhadov's government as legitimate and ordered a massive ground assault into Chechnya. This was declared to be not a war but a counterterrorism operation, which gave Russian forces sufficient cover to conduct operations without regard to any limits. The ruthlessness and implacable remorselessness of the nearly ten-year struggle that followed puts it in a unique category of military operations.

The ground element of the second invasion of Chechnya demonstrated Putin's commitment to end the crisis in Chechnya once and for all. This time, 100,000 troops crossed the border and moved with little resistance to the Terek River. Units were better organized and prepared, command and control was improved, logistics were improved, more sophisticated and deadly weapons systems were employed, and a number of pro-Russian Chechen armed groups provided valuable intelligence and scouting support.

From the very beginning, to avoid casualties, Russian forces avoided direct combat in the city; instead, any resistance to Russian forces was answered with enormous firepower, including multiple rocket launchers with flame munitions, short-range ballistic missiles, artillery, and air strikes. Grozny remained the main objective, as before, but this time the city would be attacked only after several weeks of continuous bombardment. The city was hit with 250 Scud long-range ballistic missiles with 985-kilogram warheads and 130 SS-21 short-range ballistic missiles with 482-kilogram warheads. Although the deputy chief of the Russian General Staff, Valery Manilov, claimed that only pinpoint strikes on individual targets were taking place in the city, the residents of Grozny described the attacks as "carpet bombing."[3]

New Tactics in the Assault on Grozny

Reflecting the strategic lesson learned about avoiding urban combat, a bulletin from the headquarters of the joint group of forces in the North Caucasus announced that federal forces did not intend to storm Grozny. "The enemy will instead be destroyed by the same means that are being used now—air strikes and artillery bombardment." Leaflets dropped on Grozny in early December warned the approximately 40,000 civilians there that the city would be attacked in five days and anyone remaining would be considered a threat. "Persons re-

maining in the city will be considered terrorists and bandits," the leaflet read, "and will be wiped out by artillery and air power. There will be no more negotiating." Although evacuation routes were designated after international protest, they were not secure from bombardment.[3]

Despite the headquarters announcement, Russian units began an assault using small "storm detachments," supported by pro-Russian Chechen militia to locate strongpoints. These strongpoints were targeted with artillery, air strikes, and fuel-air explosives. The storm elements themselves, composed of engineers, special operations troops, and snipers, would then move in to control the area. Other storm detachments, infantry supported by tanks, armored personnel carriers, and self-propelled artillery, established similar positions, forming an interconnected, mutually supporting secure base from which further advances could take place. The intent, according to one observer, was to "break rebel units down into small groups that will be much easier to destroy one by one." Units of the MVD and OMON (special police with paramilitary capabilities) followed to secure cleared areas.

Although progress was made, the advance into the city center was heavily contested. Chechens made extensive use of improvised munitions and booby traps and filled trenches with oil, which was set on fire, to mask their movements. Rear areas under Russian nominal control were never completely secure, as Chechen fighters made use of underground tunnels and sewers to move and reoccupy positions, forcing the Russians to retake them. While the carnage in the city grew, Prime Minister Putin stated that everything was going according to plan; commanders were protecting the lives of their soldiers, and the number of civilian casualties, he said, could be counted on one's fingers. He called any reporting to the contrary "propaganda and lies." [1]

By January, the fighting centered on control of Minutka Square, south of the Sunzha River. Tall buildings there became key objectives and were the focus of heavy and costly fighting. As much as the Russian leadership had wished to avoid casualties, there was no choice now but to engage in close combat and house-to-house fighting. The Chechens had made careful preparations to defend the city, "turning it into a multilayered fortress," as one Russian general observed. [2]

Chechen fighters were effective in keeping Russian forces off balance with small units of twenty to thirty men defending two or three city blocks and engaging the attackers with snipers, machine guns, and grenade launchers. The fighters also conducted rapidly shifting counterattacks throughout the city, but, as before, Russian superiority in firepower, especially air strikes, helicopter attacks, and missile and artillery bombardments, took a heavy toll. [3]

Grozny Falls

Several thousand fighters and civilians made a bold breakout attempt on January 30–31, escaping through a minefield under artillery and machine-gun fire. Although Maskhadov wanted to keep the Russians tied down in Grozny, where

the Chechens held so many advantages, Shamil Basayev and other leaders wished to preserve the core of Chechen fighting strength and not waste it in attritional battles in the city throughout the winter. They believed it was better to escape to the mountains and transition to guerrilla warfare.

Caught by surprise, the Russians failed to stop the fighters, the majority of whom escaped in the darkness and remained active in the mountains throughout the spring. In the city, however, by February organized resistance was crumbling, and gradually MVD and OMON forces established local control. Conventional troops were still required to patrol and secure areas, and for months ambushes and firefights continued with regularity. The joint group of federal forces headquarters estimated that about four hundred fighters had never left Grozny and were committing "acts of sabotage." As the Russians cleared the city of mines and unexploded ordnance, there were rumors that they were using explosives to seal off buildings where large numbers of civilian bodies lay, to disguise the scale of noncombatant losses. Grozny residents, according to one reporter, "speak of atrocities and unlawful actions" committed by Russian troops.

The Uneasy Peace

In March 2003, a new Chechen constitution was ratified that declared Chechnya a part of the Russian Federation. In October, Imam Akhmad Kadyrov was installed as president of Chechnya. Kadyrov commanded a loyal following of about ten thousand fighters who had allied themselves with the Russians, along with two Chechen special battalions tasked with counterinsurgency sweep operations in conjunction with Russian military and Interior Ministry troops. These sweeps would become infamous for their allegations that followed them of atrocities and human-rights violations.

In May 2004, Kadyrov was killed in a terror bombing at Dynamo Stadium. The Russians set up Kadyrov's son, Ramzan, to become the new president, but the twenty-seven-year-old had to wait until he reached the minimum age of thirty according to the Chechen constitution. Instead, he became the deputy prime minister until 2005. Alu Alkhanov, elected in 2004, served as president until removed by Putin in 2007, allowing Ramzan to become the acting president and soon afterward be sworn in as president. Shamil Basayev became the face of Chechen Islamist terrorism, launching high-profile attacks that sent aftershocks throughout the world. Between 2001 and 2006 Chechen resistance leaders were tracked down and killed. Basayev himself was killed in 2006. Attempts by the remaining leaders to unite Chechen nationalists with jihadists failed, and active resistance faded. In 2007, Ramzan Kadyrov became president, having led his militia in an all-out effort to defeat and destroy the resistance. This arrangement fit well into Putin's effort to lower the Russian profile in Chechnya and allow pro-Russian Chechens to eliminate Chechen militants.

In 2009, the Russian Federation declared the counterterrorist mission, begun in 1999, completed. Today Kadyrov, holding on to power with the full political and financial backing of Moscow, acts as a law unto himself, with no apparent

restraints. Kadyrov enjoys a semiautonomous status unknown elsewhere in the federation, because he serves Russian interests as long as he can guarantee security and pacification in Chechnya, whatever his methods. Nevertheless, the danger exists that this tenuous peace can only exist as long as Kadyrov maintains control. He could turn against Russia, or he could be eliminated by opposition groups, many of whom are likely awaiting the opportunity to seek retribution through the blood-feud tradition, which would most likely lead to civil war and the dilemma of yet another Russian intervention.

In the meantime, Kadyrov has demonstrated total support for Putin's war in Ukraine. He was rewarded with a promotion to colonel general and in 2022 was a radical supporter of a scorched-earth policy against Ukraine. He has since placed Chechen fighters under Russian control and echoed Putin's condemnation of Prigozhin's Wagner rebellion. Kadyrov is rumored to be seriously ill, leaving a number of unresolved issues for Putin and Chechnya.

GROZNY: AN ASSESSMENT

The first Chechen war cost Russia the lives of 7,500 men, the second an additional 5,000. No accurate number exists for Chechen losses, but as many as 65,000 men, women, and children died. This was total war waged on the people of Chechnya. Grozny was the political capital and center of Chechen nationalism. It was a symbol of dominance and legitimacy for whoever controlled it. As such, it became the ultimate decisive point of the Chechen wars. Because of the longtime animosity and distrust between Russians and Chechens and their long history of brutal encounters, both armed and unarmed, the battles for Grozny took on a character of which modern history offers few other examples. This makes providing an assessment quite difficult. On one hand, this urban battle bears out Clausewitz's understanding that without a political object, war would be "a complete, untrammeled, absolute manifestation of violence … and rule by the laws of its own nature." The battles in Grozny displayed just such violence: "War, untrammeled by any conventional restraints, … broken loose in all its elemental fury."

On the other hand, counter to Clausewitz's dictum, it is clear that in Grozny each side had a political objective, but they were of a nature that implied no restraints in their attainment. The Chechen wars represented a condition of war that Clausewitz believed could exist only in the imagination—total war, a war without limits, a war of untrammeled fury. Thus the difficulty of assessment: such a condition would be unlikely elsewhere, and therefore the lessons of the battles for Grozny must be approached with the understanding that, both the Russians and Chechens having fought without restraint, neither has many positive lessons to offer military professionals. Nevertheless, there are a number of useful avenues to explore.

The Danger of Using the Military as a Political Expedient. Yeltsin and Russia's political elite were interested only in a rapid solution to the problem of Chechen separatism. Despite warnings from senior officers, a number of whom

resigned rather than participate in the operation, and recommendations from the General Staff and the commander of the North Caucasus Military District that intervention in Chechnya could not be conducted on a shoestring, Russian political leaders simply expected military force to solve the problem, not troubling to form either a clear understanding of the strategic conditions or a clear desired end state. The simple presence of a large military force in Grozny, it was assumed, would cause everything to fall into place; the problem would be solved in a matter of weeks. The Russian forces were totally unprepared for the complex reality they encountered as they moved into Chechnya and then into Grozny itself.

Underestimating the Chechen Resistance. The Chechen people are a warrior culture, based on the blood feud and a spirit of independence. The Chechens who volunteered to fight were honoring an ancient history and tradition of resistance to the Russians and possessed deep collective memories of banishment under Stalin. They were fighting for their homeland and for their independence but also from a much more visceral sense of personal and familial honor. What many lacked in military skill they made up for in enthusiasm and raw courage. Others who had served in the Soviet army provided guidance and leadership. Noncombatants provided support and assistance. This was a people in arms, ready to fight, possessing a thorough knowledge of the urban battlespace and sufficient time to prepare defenses and organize.

The Importance of Tactical Intelligence. In urban warfare, there can be no substitute for timely and accurate tactical information rapidly disseminated to all units. In the first battles, both Chechens and Russians had little knowledge of what was happening a block away. For the defenders, it was a free-for-all; for the Russians, it was a matter of simply following whatever the last order was. As the battle progressed, the Chechens made excellent use of local knowledge. Russian unit movements never surprised them. Observers and lookouts provided timely warning, allowing for the assembly of fighters at danger points and coordination of ambushes or counterattacks. Many Chechens spoke Russian and listened in on radio transmissions, which allowed them to anticipate enemy actions or confuse and deceive Russian units with false information. Russian soldiers would often seek out Chechen civilians to trade weapons and ammunition for vodka or food. They were valuable sources of information, as were interrogations of prisoners and defectors.

For the Russians, tactical intelligence was largely nonexistent. There was no reconnaissance effort before entering the city, no attempt to assess the level of resistance or to locate enemy forces, artillery concentrations, or infiltration routes. The result was blind air and artillery targeting of areas in the city. Many units, with inadequate maps or without maps altogether, had to rely on directions from people in the street, a somewhat dubious and dangerous expedient. Russian units found themselves fighting in isolation, reaching points in the city where they physically could not move any farther or turn around. Here many made their last stand. By 1999, the Russians had found allies in Chechen

militia units who provided excellent tactical reconnaissance and scouting. But even their relationship with Russian units was characterized by mistrust, and the Chechen leaders complained that the Russians would often fail to come to the assistance of Chechen units in contact. While some special operations and MVD units had reconnaissance capabilities, these were limited and often inadequate to the task of keeping accurate track of the combat situation.

Command and Control. In modern urban combat, the chain of command must be simple and flexible enough to react to a fluid and continuously changing battlespace. The Russian command structure throughout the battles for Grozny was top-heavy and ineffective. As a result, units fought their own uncoordinated battles and were not resupplied or adequately supported by artillery or air. By 1999, however, because of extensive exercises and rehearsals, the units that entered Grozny were better equipped, and they demonstrated better coordination. Nevertheless, the basic problems persisted: effective coordination and orchestration of combat actions were lacking. Fratricide was common. The high command's preference for firepower over maneuver was a significant indication of weak command and control—a limitation the Russians were unable to overcome. The technique of organizing units into small storm formations was in part a reaction to bypass the poor capability of higher-level headquarters to direct combat units, a critical weakness that the Russians never overcame (and, as they are demonstrating today, continues to be a problem).

Small-Unit Tactics. Grozny proves that urban fighting, by its very nature, degenerates quickly into chaos as a thousand small fights erupt above, below, and on the ground.

Large-unit cohesion almost immediately breaks down in the urban battlespace. The Russian army trained at the platoon and company levels; squad tactics and leadership were not emphasized. Nor were units trained in fighting in urban areas. Thus, there was no understanding of how infantry and tanks operated in the urban battlespace and no comprehension of the battlespace as three-dimensional: not only the ground view but conditions above and below the ground needed to be understood. Specialized units, which operated in small groups, had the advantage in Grozny, but their inexperience in urban warfare made them less effective than they might have been. It was not until units were reorganized and integrated into storm units in a structure where combined arms could provide mutual support in all three dimensions, that the Russians proved successful. Nevertheless, these tactics required enormous amounts of firepower intended to destroy defensive positions as units moved forward slowly and deliberately. Casualties in this kind of combat are inevitably high, and units wear down after only a few days in contact.

The Chechens excelled at small-unit tactics, continually stalling and steadily weakening attackers. The strategy was clear: to capitalize on the fact that the city gave the defenders all the advantages against a mechanized force. It was the ideal battlespace in which to do what a smaller, more mobile, weaker force can do against a much more powerful enemy—draw the attacker into the

city and wear down his will to fight through innumerable small but drawn-out and costly battles. Much of the first battle in Grozny was unorganized and free flowing, but between 1996 and 1999 Chechen fighters became much more skilled and adept at camouflage, deception, and the tactical employment of weapons, combining machine guns, sniper systems, grenade launchers, antitank rockets, mines, and homemade bombs in an orchestrated manner to isolate, cut off, and destroy Russian combat groups. Such was the success of Chechen tactical units that the Russians turned increasingly to heavy bombardments both prior to and during an attack, simply because they could not employ small units in a coordinated and effective manner. In effect, it was only through the indiscriminate destruction of the city that the Russians were able to take control. In the end, the Chechen fighters had nothing to shield them—the urban battlespace that worked to their advantage ceased to exist.

Morale and Discipline. In urban warfare, forces that demonstrate high morale and fight under trusted leaders have the advantage. Many of the atrocities that became commonplace in Chechnya, indiscriminate bombardments and direct attacks on civilians, arose from the Russian soldier's beliefs that the war was the invention of politicians to cover problems at home and that Chechnya was a foreign land, not part of Russia. Conscript soldiers sent into the maelstrom of urban combat with only rudimentary preparation suffered widespread collapse of morale, marked by desertion, defection, surrender, and refusal to obey orders. Soldiers' mothers arriving in Grozny in the midst of battle to plead for their sons' release or to locate the bodies of men reported missing created a sense that the military leadership had failed. For the Chechens, morale was high and remained high throughout the two wars, because when fighting on their own ground, a battlespace over which they achieved complete mastery, they had defeated the Russian army. Chechens gained in urban-combat skills and devised tactics that were often quite unorthodox. The success of these tactics inflated the reputation of the Chechens to the extent that many observers in the West declared them the greatest urban guerrilla fighters in the world. Such a reputation, however undeserved, inculcated a sense of caution in Russian forces moving into Chechnya in 1999 to an extent that resulted in the deployment of a force of 100,000 troops and the employment of massive firepower before every advance.

Media. The modern urban battlespace exists in multiple dimensions. The newest and most influential determinant of the outcome of a battle for a city is how the fighting is portrayed in the information battlespace. The Russian print and television media enjoyed a heady degree of freedom in the early Yeltsin years. Chechnya offered journalists the opportunity to report unscripted and honest information about events, often at complete odds with official pronouncements. Russian television seemed to revel in the often gruesome aspects of battle, providing an unblinking eye that revealed much of what was really happening in Grozny. Official Russian media, in contrast, were caught completely off guard and had no opportunity to gain credibility. The government failed to offer any convincing reasons why the public should support the intervention or why

Russian soldiers had to fight in a city. By the second Chechen intervention, Putin had for the most part gained a stranglehold on Russian media generally, and media access to the battle area was strictly limited. Many committed to objective reporting had to be smuggled in by the Chechens, often at great risk. Thus even in a media blackout—Putin's ability to control information drew public attention away from the fighting and dampened criticism—reports emerged from Grozny revealing conditions directly contradictory to official pronouncements. The Chechens also gained an advantage over the Russians by a creative use of broadcast media, especially television, overriding Russian broadcasts to allow Dudayev to speak directly to the people. The Internet became an invaluable means of building sympathy abroad and of soliciting monetary and other assistance from a sympathetic global audience.

In 1999, however, it was much harder for the Chechens to convince the world that they were not a terrorist state harboring foreign jihadists. The official Russian media had gained the advantage by preparing the information battlespace to create the impression in the minds of a global audience that the incursion into Chechnya was a counterterrorist operation, intended to eliminate a threat posed not only to Russia but to the rest of the world. After 9/11, it became even easier for Putin to make common cause with the United States as a partner in the global war on terror, and this smokescreen allowed Russian forces to justify nearly any level of violence as legitimate military action.

As these points illustrate, urban combat in the twenty-first century requires extraordinary coordination and the integration of exceptionally well-trained and prepared forces capable of sustaining high-intensity combat for weeks on a media stage before a global audience. Civilian noncombatants will be nearly impossible to separate from fighters, and the use of the word "precision" in describing air and artillery strikes will always be a seductive and dangerous fantasy. The agony of Grozny is a cautionary lesson for all military professionals.

NOTES

1. James Hughes, Chechnya: From Nationalism to Jihad (Philadelphia: University of Pennsylvania Press, 2007), 11. See also Robert Seely, Russo-Chechen Conflict, 1800–2000: A Deadly Embrace (London: Frank Cass, 2001), 7–9.

2. Seely, 104–105.

3. Seely, 106–107.

4. Seely, 110.

5. Seely, 121; Brian Glyn Williams, Inferno in Chechnya (Lebanon, NH: University Press of New England, 2015), 84.

6. Ilyas Akhmadov and Miriam Lanskoy, Chechen Struggle (New York: Palgrave Macmillan, 2010), 15; Seely, 163.

7. Williams, Inferno in Chechnya, 88.

8. Akhmadov and Lanskoy, Chechen Struggle, quotation on p. 5. Basayev claimed he led a battalion. Akhmadov describes Basayev's group as "the most experienced and battle-ready of the Chechen forces" (p. 7).

9. Seely, Deadly Embrace, 220–21.

10. Mark Galeotti, Russia's Wars in Chechnya, 1994–2009 (New York: Osprey, 2014), 34; John R. Pilloni, "Burning Corpses in the Streets: Russia's Doctrinal Flaws in the 1995 Fight for Grozny," Journal of Slavic Military Studies 13 no. 2 (June 2000): 43.

11. Pilloni, 44.

12. Pilloni, 45, 46–47, passim.

13. Seely, Deadly Embrace, 227.

14. Vadim Belykh, Nikolai Burbyga, Arkady Zheludkov, and Sergei Mostovshchikov, "Grozny: Ill-Trained, Ill-Led Russians Chopped Up," Current Digest of the Post-Soviet Press 47, no. 1 (February 1, 1995), 1. These reporters from the Izvestia staff; their published dispatches appeared in the newspaper on January 6.

15. Seely, Deadly Embrace, 245; Pilloni, "Burning Corpses in the Streets," 50–52; Akhmadov and Lanskoy, Chechen Struggle, 20–21.

16. Seely, 246–47, 258–60; Pilloni, 50–52; Williams, Inferno in Chechnya, 93–94, 96; Belykh, Burbyga, Zheludkov, and Mostovshchikov, "Ill-Trained, Ill-Led Russians Chopped Up," 3; Stasys Knezys and Romanas Sedlickas, The War in Chechnya (College Station: Texas A&M University Press, 1999), 105–11, passim; Ib Faurby and Märta-Lisa Magnusson, "The Battle(s) of Grozny" (Baltic Defence College lecture, November 1, 1999).

17. Akhmadov and Lanskoy, Chechen Struggle, 20–21. See also Natalya Gorodetskaya, "According to Intelligence Reports, Dudayev's Army Consists of More than 20,000 Men," Current Digest of the Post-Soviet Press 47, no. 5 (1995), 12.

18. Belykh, Burbyga, Zheludkov, and Mostovshchikov, "Ill-Trained, Ill-Led Russians Chopped Up," 2.

19. Akhmadov and Lanskoy, Chechen Struggle, 17.

20. Akhmadov and Lanskoy, 20.

21. Sergei Parkhomenkao, "Russian Forces Bomb Residential Areas of Grozny with Unprecedented Brutality," Current Digest of the Post-Soviet Press 51, no. 49 (1999) 8; Faurby and Magnusson, "Battle(s) of Grozny"; Timothy L. Thomas, "The Battle for Grozny: Deadly Classroom for Urban Combat," Parameters 29, no. 2 (Summer 1999): 88.

22. Marcel H. Van Herpen, Putin's Wars: The Rise of Russia's New Imperialism, 2nd ed. (London: Rowman & Littlefield, 2015), 164; Pavel Felgengauer, "The

Russian Army Employs New Tactics," Current Digest of the Post-Soviet Press 47, no. 2 (1995) 9 (initially appeared in Sevodnya, on 10 January); Gregory J. Celestan, "Red Storm: The Russian Artillery in Chechnya," Field Artillery (January–February 1997), 43.

23. Mikhail Leontyev, "Impressions: The Chechen Front," Current Digest of the Post-Soviet Press 47, no. 5 (1995) 12.

24. Pavel Felgengauer, "Three-Day Chechen Counterattack in Grozny Brings Heavy Losses: Russian Troops Reach Ruined, Empty Presidential Palace, Raise Flag—Army Intends to Go into Winter Camp in City," Current Digest of the Post-Soviet Press 47, no. 3 (1995) 11.

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BATTLE OF FALLUJAH

Map redrawn from Kenneth Estes, U.S. Marines in Iraq, 2004–2005 (Quantico, VA: U.S. Marine Corps History Division, 2009), 29

DOUGLAS WINTON

9

THE BATTLE FOR FALLUJAH

Exploiting Technological Advantages in Urban Combat during Operation Al Fajr, November 2004

IN THE LATE 1990s the U.S. Army included urban battles in its strategic war games, largely as a response to global urbanization trends, its experiences with urban combat in Mogadishu and Sarajevo, and its observations of the Russians' battle with Chechen separatists in Grozny. From these games Maj. Gen. Robert Scales, then the commandant of the U.S. Army War College, concluded that "urban warfare, a subject that many military professionals would prefer to avoid … may be the preferred approach of future opponents. While the different technology and tactical skills of armies are a factor, defensive urban warfare is a great equalizer for an under-modernized force."[1] Two years later, RAND analysts who studied the Russians' experience in Grozny agreed with this contention. They reasoned that "urban combat is justifiably seen as an equalizer. The superior combat power of U.S. armed forces is in many ways effectively neutralized on city streets."[2] This conclusion was seemingly affirmed by the U.S. decision to halt Operation Vigilant Resolve in Fallujah prematurely in April 2004. This hastily planned operation to avenge the brutal mutilation of American contractors occurred alongside political unrest among Shia Iraqis protesting military operations against Muqtada al-Sadr's militia in Kut, Karbala, and Najaf.[3] It coincided also with the Coalition Provisional Authority's anxiety over the pending exposure of prisoner abuse at the Abu Ghraib prison. A few weeks after the operation began, American political leaders ordered the Marines to leave the city in order to sustain other political objectives.

In November 2004, a U.S. joint force led by Marines with Iraqi Army augmentation launched a second offensive into Fallujah, for different political reasons and with different military objectives, and it achieved dramatically different results. Despite the previous warning of urban combat as a great equalizer, this joint force demonstrated great proficiency in employing advanced technological precision firepower, intelligence, and communications systems. The urban terrain did not neutralize these capabilities as some had feared. This chapter will evaluate the effect of urban combat on the technological advantages of U.S. Marine Corps and Army units in Operation Al Fajr. After a brief description of the circumstances leading to the battle, the forces involved, and the operational conditions, it will evaluate the U.S. forces' employment of technology, the extent to which the two sides achieved their objectives, and the degradation (if any) of the U.S. technological advantages.

STRATEGIC CONTEXT

At the end of Operation Vigilant Resolve, I Marine Expeditionary Force, of which the 1st Marine Division was the ground combat element, created the Fallujah Protection Army (aka the Fallujah Brigade), primarily from former Ba'ath party officials and Iraqi Army remnants, as an Iraqi force that would secure Fallujah from foreign extremists. By July 2004 American analysts and leaders had determined that the Fallujah Brigade was actually supporting and contributing to the growing insurgency. The Fallujah-based insurgents included multiple

groups with an estimated two thousand fighters who founded and cooperated in a citywide mujahedeen Shura (consultative body) and in the National Islamic Resistance Operations Center which divided responsibility for securing, controlling, and defending Fallujah. Despite differing agendas, the various insurgent groups operating in Fallujah looked for opportunities to exploit their success and secure a sanctuary for planning and conducting operations throughout Iraq. The insurgents' assessment that they had defeated the Americans in Fallujah in April 2004 galvanized their purpose and prompted a level of cooperation they had not previously enjoyed.

In the face of this robust and determined insurgent force, the nascent Iraqi government and U.S.-led coalition agreed they had to reestablish control of Fallujah and do so before the elections scheduled for January 2005. The insurgents in Fallujah knew there would be a substantial coalition-led attack into the city, because of Prime Minister Ayad Allawi's public statements and public-information efforts to persuade Fallujah's residents to leave it. They determined they could not hold the city, at whatever cost, and should not try; they sent about half of their fighters and nearly all of their leaders out of the city. Those who remained were committed to causing as many American casualties as possible but had no expectation of preventing the U.S. and Iraqi forces from retaking the city.

MILITARY FORCES

The U.S.-led force that attacked into Fallujah in November 2004 was larger and more capable than the force used in April. For Operation Al Fajr, two Marine Corps regimental combat teams (RCTs) and two U.S. Army mechanized battalions conducted the assault that would reestablish Iraqi governmental control of Fallujah. This was nearly a 400 percent increase in combat power over that available for Operation Vigilant Resolve. These units had access to a wide array of intelligencecollection and -analysis capabilities, nearly continuous aerial surveillance of the city, and technical monitoring of insurgent communications. Many of the soldiers and Marines in these units had participated in the invasion of Iraq in 2003, including battles in Najaf, Karbala, and Baghdad, and thus had recent experience with urban combat. Also, I MEF had been reinforced with twenty AV-8B Harriers that possessed improved targeting capability in their forward-looking infrared system (Litening II). These targeting systems linked digitally with Marine infantry battalions, providing commanders with real-time imagery of the battlefield whenever the Harriers were overhead.[1] I MEF had also added Scan-Eagle unmanned aerial vehicles (UAVs), which had not been available in April, to their arsenal.[11] The U.S. Army battalions brought M1A2 Abrams tanks, M2A3 Bradley infantry fighting vehicles, 120-mm mortars, and attached artillery. The RCTs, accordingly, were a substantially more lethal and capable force than had been used in Fallujah in April. Two Iraqi battalions consisting of two thousand soldiers augmented these ten thousand U.S. troops.[12]

Throughout the summer of 2004, Multi-National Corps–Iraq (reporting for operational matters to Multi-National Force–Iraq, or MNF-I) and I Marine Expeditionary Force conducted detailed planning for Operation Al Fajr, addressing

such matters as logistics, air support procedures, and how ground maneuver forces would enter the city and seize key objectives.[13] At the same time, it was leveraging the coalition's air supremacy to collect intelligence about insurgent actions in the city. This nearly continuous surveillance, which reflected a deliberate effort by the U.S. Air Force to improve its support for urban battles, enabled the Marines to develop detailed maps and terrain models of the city that facilitated planning and aerial attacks during the assault.[1] As their understanding of the insurgent networks grew, the Marine planners gradually shifted its aerial support from surveillance to targeting key control nodes and leaders.[1] The foreign fighters recruited by al-Zarqawi did not understand that the U.S. forces were able to monitor radio communications and cellphone calls. The Marines would probe the eastern part of the city to test the insurgents' responses and to bait them into discussing U.S. movements, then use the intercepts to develop detailed information about concentrations of fighters. On at least two occasions before the assault, American aircraft attacked insurgent command nodes on the basis of signals intelligence.[1]

Perhaps the most critical component of the coalition plan for a second assault into Fallujah was the deliberate and extensive effort to persuade the residents to leave the city before the assault commenced.[1] The departure of civilians from Fallujah granted the U.S. forces operational advantages. Without a requirement to support civilian livelihood, the Iraqi government cut power to the city, degrading the insurgents' command and control and further isolating them from external support. The paucity of civilians also reduced ambiguity about combatant or noncombatant status, allowing the operation to proceed with greater speed and firepower while retaining the political support for the operation.[1] Prime Minister Allawi complemented these efforts and demonstrated political support for the operation by officially disbanding the Fallujah Brigade, establishing a curfew, and declaring the "open carry" of weapons in Fallujah to be illegal.[1]

The insurgents understood well that the Marines were preparing for an assault into Fallujah and by August 2004 had begun deliberate and extensive preparations of their own.[2] These included recruiting additional fighters (many of them foreigners), constructing obstacles (mostly with abandoned buses and other vehicles), digging trenches along key routes to limit access by tanks and other mechanized vehicles, establishing more than three hundred defensible and mutually supporting positions in buildings, connecting key positions by tunnels, stockpiling munitions, and establishing ambush zones with a series of connected improvised explosive devices (IEDs).[21] Many of the defensive positions had obstacle belts of concrete barriers, earthen berms, and bomb-laden ditches.[22] The insurgents also used their sanctuary in Fallujah throughout the summer of 2004 to train their fighters for a vigorous defense.[23] Once the fighting began, it became clear to U.S. commanders that the insurgents had developed effective tactics for defeating armored vehicles. After the battle, commanders would report that their firepower had effectively reduced most of the obstacles and defensive positions but that the insurgents had displayed more tenacity and tactical profi-

ciency than had been anticipated.[2] These fighters lacked sophisticated weapons but had no shortage of AK-47 rifles, RPG-7s, grenades, mines, and sundry explosives.[2] Also, the depth of preparation and sophistication of IED tactics also indicated the Fallujah insurgents were well funded.

In October 2004, American intelligence analysts assessed that there were approximately two thousand insurgents in Fallujah.[2] It was then, as the coalition began concentrating around the city, indicating an attack was imminent, the insurgent leaders deliberately reduced their force, dispersing about 50 percent of their fighters throughout Al Anbar Province and across Iraq. This action was taken in part to preserve combat power but also to threaten the success of the coalition attack: the detached fighters were to target forces controlling access to Fallujah and coalition interests elsewhere.[2] Successful aerial attacks on senior insurgent leaders during September and October likely contributed to the decision of almost all their surviving leaders to leave the city as well.

THE URBAN COMBAT

The two RCTs assembled for the assault, each with an attached U.S. Army mechanized battalion and attached understrength Iraqi units, planned to advance through the city from north to south. RCT 1 was in the west, focused on clearing the anticipated command-and-control centers in the Jolan district; RCT 7 was in the east, intent especially on clearing the insurgent fighters out of the industrial area. On 8 November, after days of feints along the eastern edge of Fallujah and special operations raids into the city itself, the RCTs breached the obstacles along the railroad track that marked its northern edge. They quickly advanced through Fallujah, relying on the speed and shock effect of the tanks and mechanized vehicles to overwhelm the insurgents and destroy defensive positions whenever they encountered them.[2]

The insurgents withdrew through a succession of prepared defensive positions, usually in buildings.[2] They fought in small groups using typical guerrilla tactics, with machine guns, RPGs, and occasionally mortars.[3] At many of their established defensive positions were reconnaissance elements that would attempt to draw attackers into booby-trapped buildings.[31] In each engagement, U.S. forces matched the intensity of their fire to the ferocity and determination of the insurgents'. As the assault progressed farther into the city, the defensive positions became stronger; U.S. forces responded by increasing the volume and intensity of firepower from the outset of each engagement.[32]

By November 20, the two RCTs of 1st Marine Division had fought their way completely through the city. They had degraded the insurgent forces to a level that was no longer a substantial threat, and the two mechanized Army battalions were detached to return to their parent units elsewhere in Iraq.[33] By a couple of weeks later, 1st Marine Division had reduced the combat power in Fallujah to just one RCT of three Marine battalions and some supporting Iraqi units. This smaller force would spend the next few weeks finding and eliminating pockets of insurgent resistance and controlling the return of Fallujah's residents.[3]

Role of Firepower

The firepower of the U.S. forces in Operation Al Fajr far exceeded that of the insurgents in quantity, precision, reliability, and effectiveness. U.S. units expended more than 1,500 rounds of 120-mm mortars and six thousand rounds of 155-mm artillery.[3] Aviation units that supported the operation fired 391 aerial rockets and missiles and dropped 318 bombs.[3] The support they provided the ground forces was essentially ubiquitous. So many aircraft supported the assault that the airspace over the city had to be deconflicted by altitude according to aircraft type. The advancing ground forces had such confidence in their air support that they often called on it to engage targets just a few blocks in advance of their own positions.[3] Ground combat units made particular use of the 20-mm, 40-mm, and 105-mm cannons on two AC-130 Spectre gunships, each gunship flying with extra ammunition on board and firing all of it in support of the ground forces before having to break off for fuel.[3] Beyond destroying insurgent forces the aerial bombardments regularly caused secondary explosions, indicating the presence of weapon- and munitions-storage sites.[3]

As is typical of most insurgents and guerrillas, the insurgents in Fallujah had no access to artillery or air-delivered munitions. They used mortars and rockets to harass U.S. forces in their bases outside the city, but these caused few casualties in the urban battle and produced no meaningful impact on its conduct. The insurgents' most effective assets were RPGs, sniper rifles used against dismounted troops, and small arms when they were able to draw U.S. units into buildings.

U.S. employment of firepower at Fallujah began with preparatory fire from artillery units and AC-130 Spectre gunships against twenty preplanned targets as the ground maneuver units moved into their attack positions to the north of the city. As a result of the detailed reconnaissance and surveillance conducted before the operation, the preparatory fire effectively suppressed its intended targets. As they would be throughout the fight, the AC-130 Spectre gunships, with their multiple caliber of cannons and their loitering capability, were particularly helpful in establishing the conditions necessary for a successful assault, destroying obstacles that would have impeded maneuver through the city. A gunship's 105-mm cannon was particularly effective at this task, and its 20-mm and 40-mm weapons engaged insurgents attempting to move between defensive positions. [1] Commanders highly valued the AC-130 Spectre gunships for their precision, reliability, and variety of munitions; they carried a weapon for every conceivable target. For example, the Marines noted, one of the 500-pound bombs delivered during the preparatory phase caused a string of IEDs to detonate and so cleared a route that otherwise would have posed a substantial obstacle. [2]

While it is hard to establish the full effect that these various forms of preparatory fire had on the insurgents, the U.S. commanders involved assessed that it rendered the insurgents unable to prevent American ground maneuver units from breaching the railroad berm and restricted them to harassing the breach sites with small-arms fire. In general, delays to U.S. forces resulted more from

normal combat friction than from enemy action. [3]

In the wake of the preparatory phase, Marine F/A-18s used eight 2,000-pound bombs to blow breaches in the railroad berm large enough to allow armored vehicles access to the city. As U.S. forces flowed through their breaches across the railroad tracks, aircraft aided them with a plethora of precision fires. The Marines F/A-18s and AV-8B Harriers expended 500-pound GBU-38 Joint Direct Attack Munitions (JDAMs) with GPS guidance systems; 500-pound GBU-12 laser-guided bombs; and Maverick air-to-ground missiles. The U.S. Air Force provided F-16s for additional bombing support and armed MQ-1 Predator remotely piloted aircraft that could fire Hellfire missiles into insurgent positions.

The technological superiority of American forces' firepower was not simply a matter of quantity of heavy weapons and access to airpower. The Marines were particularly impressed with and made extensive use of the attached Army units' 120-mm mortars. Although these mortars had less range and explosive power than the supporting artillery, their high angle of fire was effective in suppressing and neutralizing insurgent positions on rooftops. These mortars had been improved recently with a new Mortar Fire Control System (M95/96 MFCS) that allowed the mortar platoons to travel with mechanized battalions and quickly provide accurate fire. Unit commanders had complete confidence that if they correctly identified a target's location, the mortars would hit it.

U.S. precision fire prevented the insurgents from controlling the fight and limited international commentary about the operation. The advancing ground maneuver units relied on firepower from aircraft, artillery, and mortars to cover their movements and destroy defensive positions. This forced the insurgents into the position of having to react to U.S. actions and aided American forces in sustaining their momentum and retaining the initiative throughout the attack. The combination of detailed surveillance, effective communications, and precision munitions made possible the responsiveness, reliability, and lethality of firepower at Fallujah. [1]

Role of Intelligence

U.S. forces used sophisticated intelligence-collection platforms and analysis systems that insurgents could not match. The insurgents relied on a network of informants that, though initially effective, essentially evaporated as the civilians left the city in advance of the fighting. Conversely, despite not having access to the city U.S. intelligence collection and analysis had continued essentially unabated through the summer of 2004. Special operations forces, human-intelligence agents, UAVs, signals communications monitoring, and satellites provided information that contributed to the U.S. understanding of the insurgents' capabilities and intentions. These assets gave U.S. forces a substantial advantage by revealing the location of many insurgent defensive positions while leaving the insurgents uncertain about the direction of advance and timing of the U.S. assault into the city. [2] The Americans monitored insurgent radio communications and conducted aerial surveillance with aircraft and satellites to identify

where insurgents had created command nodes, concentrated their fighters, established obstacles, and built defensive positions. [3] At times U.S. forces would jam the insurgent communications instead of monitoring them. Intelligence analysts identified thirty-three mosques that the insurgents used as command centers, munitions depots, and interrogation facilities. Finally, they concluded that the Jolan district, the northwest section of the city, was a stronghold that the insurgents would defend aggressively. This constituted a rare instance of an inaccurate intelligence estimate; during the battle the insurgents did not offer significant resistance in this area. Ultimately, American commanders assessed that the bulk of insurgents' defensive positions were in the eastern portions of the city.

Commanders down to the company level controlled UAVs to collect imagery essential for planned engagements. These reconnaissance and surveillance aircraft allowed commanders to confirm enemy presence or absence at given locations and then adjust targeting and maneuver plans as appropriate. The infrared capability of some UAVs enabled them to detect insurgents moving at night. This nearly constant access to imagery assisted decision-making and contributed to the pace and success of operations. Commanders' access to UAV imagery allowed them to "see around corners" and negate urban defenders' traditional advantage of controlling the ideal positions for surveillance.

Role of Communication Systems

U.S. forces maintained effective communication networks that enabled them to synchronize complex operations. The most challenging portion of 1st Marine Division's assault into Fallujah was the initial crossing of the railroad. Its units conducted these crossings while being observed from insurgent defensive positions, at night, in multiple locations, with supporting artillery and air attacks. Such conditions often produce the fog and friction that can unhinge military operations. Indeed, U.S. units experienced a fair amount of friction at the crossings: the death of a battalion command sergeant major, breaching devices that failed to operate correctly, and bulldozers that became stuck in the mud or were inadequate for their tasks. This friction was experienced unevenly, causing companies to cross the tracks at different times and advance at different speeds, quickly turning a planned linear assault into a discontinuous battlefield. Nevertheless, advancing units effectively monitored the locations of their flanking units and made the appropriate adjustments to fill seams and gaps. [1] Coordination among the many U.S. units was improved by the redundancy of the communications network; if one system was not working, commanders had secondary and tertiary systems they could use to control units as needed to maintain a coordinated yet decentralized assault. [2] While the urban terrain forced U.S. units to employ relays for their FM radio communications, from the commanders' perspective communications were adequate overall to monitor unit locations, dispositions, and actions and thus reduce the typical fog created by the inevitable friction of war. [3]

At the squad level, however, some Marines reported that their radios did not

provide reliable communications within buildings. This put them at a disadvantage against insurgents who typically relied more on cellphones than radios and who were more familiar with the buildings. The tactic of backing away from significant insurgent concentrations and relying on firepower to neutralize them mitigated the costs of this squad-level hindrance. A fratricide involving Alpha Company, 2nd Battalion, 2nd Infantry Regiment and 1st Battalion, 3rd Marines highlights the limitation of tactical-level communications. Yet, the fact that fratricide between ground maneuver units was rare and entirely absent between ground maneuver units and their supporting firepower confirms that higher-echelon communications were adequate for decentralized operations.

As for effective coordination between Army and Marine units, the biggest hindrance was a product solely of service-specific development and procurement processes. The Marines had built a combat-control system around mIRC, a Microsoft Windows–based Internet Relay Chat that was unfamiliar to Army units and that their commanders could access only in their command posts; Army commanders used Force XXI Battle Command, Brigade and Below (FBCB2) systems, which the Marines did not have. Army company commanders reported having a hard time coordinating over the radio with their Marine counterparts; however, this was often more a consequence of Army commanders not understanding where the Marine battalions had moved their companies than of equipment or technology issues.

Whatever the frictions of communications among ground units, no ground units ever reported problems communicating with supporting artillery or aviation. As described, units routinely called in substantial fire to reduce or eliminate insurgent resistance or defenses. This supporting fire arrived in time to achieve the necessary battlefield effect and, as noted, with no reported incidents of fratricide, which frequently is caused by poor communication and misunderstanding between the supporting and supported units.

Urban Effects

The Army mechanized battalions assaulted through the city and seized their initial objectives much more quickly than the Marines anticipated, given the difficulty of maneuvering armored vehicles through narrow city streets. Occasionally the narrowness of streets forced units to deviate from their planned routes, but these changes did not significantly slow the attack. The use of speed for shock effect and the focus on geographic objectives meant that lead units passed many buildings without clearing them or cleared but did not hold them to ensure no insurgents returned. Thus, follow-on units, often the Iraqi formations attached to the RCTs, routinely encountered these pockets of insurgents and fought them house to house and room to room. The lack of power and therefore light inside buildings forced the attacking units to halt their room clearances during the night, even though they had sophisticated night-vision devices. The limited nighttime visibility had less effect on the insurgents, who ventured out then to attack the Marines' hasty defensive positions. [1]

An Army squad leader fighting in Fallujah later recalled the isolating effect of buildings, that they forced squads and platoons to fight independently instead of always being in mutual support. He reported feeling isolated also from supporting firepower and thus forced to fight "man to man." The debris from the combat and the multiple stories of the buildings intensified the physical demands on individual soldiers. [2] The ubiquity of buildings impeded the soldiers' and Marines' ability to locate snipers and made moving down or across streets a fearful matter. [3] A sniper could fix a company of Marines in position until they coordinated supporting fire to eliminate him, occasionally hours later. Notwithstanding the battalions' and RCTs' operational success, for individual soldiers and Marines the fighting was "terrifying, brutal, and extremely violent."

COMBAT OUTCOME

After nearly two weeks of fighting, I MEF considered the insurgents to have been sufficiently defeated to release the U.S. Army augmentation and control Fallujah with just one regimental combat team. Over the next two weeks RCT 1 recleared nearly every structure in the city to collect evidence of insurgent crimes, remove munitions caches, and destroy remaining fighters. By the end of December U.S. forces had reestablished control of the city and were allowing residents to reenter gradually, rebuild damaged infrastructure, and prepare for the January elections. Despite the dire warnings about casualties in urban combat, American losses in Operation Al Fajr were fifty-four Marines and soldiers killed (less than 1 percent of the force) and 425 wounded (approximately 4 percent of the force). U.S. forces in Fallujah achieved a tactical victory with acceptable losses.

U.S. forces estimated they killed up to two thousand insurgents and detained over one thousand. The mujahedeen Shura of Fallujah originally told Arab media that only one hundred fighters had died, but later propaganda releases by insurgent groups lauded the "thousand martyrs" of Fallujah. The number of detained insurgents is of limited consequence, because many battlefield detainees were ultimately released for lack of holding capacity or insufficient evidence of their participation. Regardless, the insurgents failed in their efforts to hold the city (which proved real, however low their initial expectations) or at least impose sufficiently high costs to persuade the Americans to cease offensive operations in Fallujah; also, they expended or abandoned a substantial amount of ammunition and at the minimum suffered scores of fatalities.

The insurgents lost Fallujah but not their ability to continue attacks across Al Anbar Province and elsewhere in Iraq. The Americans assessed that, as noted above, many of the insurgents in Fallujah, including their highest-profile leaders, had escaped the city for that purpose. Anthony Cordesman of the Center for Strategic and International Studies concludes, in fact, that "Fallujah has been a political victory for the insurgents. It has further polarized the Arab Sunnis, weakened Sunni participation in the interim government, and raised more questions about the independence and legitimacy of" Prime Minister Ayad Allawi's government. Many survivors of the American assault dispersed to continue

attacks against coalition forces and the Iraqi Interim Government. Some established new cells around Baghdad that persistently threatened the government and prevented it from establishing legitimacy. [1]

I MEF assessed that its operations in Fallujah had caused injury to only twenty-five civilians and no noncombatant deaths. [2] This may be attributable to U.S. rules of engagement during the battle, by which the secretary of defense reserved to himself authority for any bombardment that might cause more than thirty noncombatant deaths; Gen. George W. Casey Jr., commanding general of MNF-I at the time, later reported that he had about ten such missions approved. [3] A United Nations–affiliated media outlet, on the other hand, reported in excess of seven hundred civilian deaths. In any case, the battle permanently displaced many of Fallujah's residents, evidenced by the slow return of residents to the city after the battle. The Iraq Red Crescent Society reported that 50,000 families had been displaced to tents around the city. Damage to the city's infrastructure was extensive; more than 60 percent of the buildings sustaining significant damage. Sixty of these damaged buildings were mosques.

ASSESSMENT

U.S. forces fighting in Fallujah did not experience erosion of their technological superiority. Rather, during every phase of the battle commanders were able to exploit their technological sophistication, often in ways the insurgents in the city could not recognize. U.S. forces overwhelmed their adversaries with massive precision firepower, destroying enemy concentrations rather than engaging them in direct firefights. Nearly continuous UAV coverage over the city gave commanders unambiguous information about insurgent positions. On the rare occasions when U.S. units were surprised, they were able to disengage and counterattack with precision aerial assets. The failure of Al-Zarqawi's senior leaders to understand the Americans' ability to monitor cellphone conversations resulted in at least two precision attacks against them. The AC-130 dominated the night skies over Fallujah, erasing inherent advantages of insurgents in familiar terrain. In every engagement, U.S. forces fought as a technologically superior force.

There was no perceptible equalizing effect of urban terrain in Operation Al Fajr. The U.S.-led coalition was the superior force and achieved its objectives at an acceptable cost in casualties and collateral damage. From company commander to division commander, leaders had confidence in their ability to access and employ the superior firepower that enabled them to win every engagement. The more they fought forces inside buildings the more convinced American commanders became that they could never accurately assess their size and the more readily they chose to engage buildings with massive firepower. From intercepts of the insurgents' radio communications, commanders knew that they had the initiative and that the insurgents were unable to maintain a coherent defense.

Yet, the insurgents were able to mount a more effective defense in urban terrain than they could have in the desert. The readily available cover and concealment of buildings enabled individual snipers to halt and delay disproportionately sized

units. Insurgents inside the city had access to cover and concealment in three dimensions that they would not have had outside. Thus, individual soldiers and Marines did not perceive the combat as swift or smooth.

Occasionally, U.S. units encountered fortified defensive positions that insurgents were determined to hold. Many of the subsequent engagements were intense firefights that resulted in American casualties. One Marine described such an engagement as "nothing but a gun battle." [1] Another said, "If we'd gotten sexy and tried to do some maneuver, we would have been more exposed to the enemy.… [A]nyway, if you're a rifle squad or platoon in an urban environment, everything is a frontal assault." [2] These engagements stopped the progress of the units involved and, being already too close to the enemy to call in fire, forced them to rely on their own tactical prowess. Despite these incidents of what seemed to participants like equal combat, the battle was mostly marked by steady advance of U.S. forces toward predetermined objectives. Individual soldiers, Marines, and small-unit leaders described engagements in which pockets of insurgents fixed a U.S. force in a small-arms exchange that lasted several hours. [3] On the first day of the attack, many such engagements lasted more than three hours. Over time, however, American soldiers' and Marines' responsiveness improved, while insurgents' capability or willingness to resist eroded, and these engagements became progressively shorter. By the third day of the battle, if an engagement with entrenched insurgents lasted for more than a few minutes, U.S. units would call for more firepower from their supporting M2 Bradley infantry fighting vehicles or M1 Abrams tanks, incrementally increasing the volume of fire from man-portable antitank weapons, heavy antitank missiles, and 120-mm main-gun tank rounds, augmented, if necessary, by air support. There was no position in the city that insurgents were able to hold indefinitely.

One reporter described the combat as "up close and personal … fighting [the enemy] room to room at point-blank range." One Marine regimental commander described it as "a house-to-house slugfest; an ugly fight." Yet, the U.S.-led force was able to make it through the city in nine days. After only two weeks of direct engagements, the Marines were able to refocus on destroying the remnants of resistance and establishing control of the city. While the urban terrain caused the United States to commit more combat power than it would have in the open facing a comparable enemy, the terrain did not so erode the technological advantages or diminish the combat capability of these units to the level of that of the insurgents.

LEARNING FROM FALLUJAH: THE VALUE OF TECHNOLOGICAL ADVANTAGE AND CONTROL OF THE NARRATIVE

The U.S. experience in Fallujah in November 2004 underscores the importance of building and sustaining political will before engaging in an urban battle. Urban terrain amplifies the inherent advantages of the defense and thus will likely force any battle to be long and to cause substantial damage to civilian infrastructure. An astute inferior force can exploit these characteristics to attack the superior force's political will for the fight. A superior force planning to attack into a city

should anticipate these conditions and deliberately build and protect political will. To that end, the attacking superior force must be certain the value of the objective is worth the inevitable costs.

The American experience in Fallujah demonstrates that superior precision firepower can contribute to tactical victory in cities. It eroded the insurgents' combat power while limiting U.S. forces' exposure to IEDs and snipers. But employing firepower in a city is not cost-free. Firepower destroys civilian infrastructure and kills civilians to at least the extent, if not more, that it destroys the enemy's combat power. Any force intending to employ firepower in a city must determine how it will cope with the inevitable collateral damage, the civilians who are killed, wounded, or displaced, and the international reaction. While MNF-I was able to lessen international criticism of its operations in Fallujah by persuading most civilians to leave the city, the hundreds of thousands displaced by that operation created a considerable humanitarian crisis. Superior firepower remains an effective means for defeating inferior forces defending in cities but can undermine strategic objectives unless effective plans are in place for addressing the inevitable civilian costs and proactively shaping the information battle.

Fallujah's complex terrain afforded insurgents many advantages. Those wishing to undermine and replace the nascent Iraqi government wisely infiltrated into cities rather than attempt to build strength and influence from isolated desert camps where they would have been easy targets for American surveillance and firepower. These generic advantages were in fact sufficient to confound hasty American attempts to root insurgents out of Fallujah in April 2004, but they were insufficient against the deliberate planning, commitment of substantial forces, and determined political will that confronted them in November 2004. The urban terrain of Fallujah equalized military capability between insurgents and U.S. forces only when the latter fought without the political will behind them to bear the substantial costs to themselves and the citizenry inherent in urban combat.

Notwithstanding the Americans' tactical success, the second battle of Fallujah was slow, resource intensive, and destructive. That it would be is an immutable truth about urban combat. Forces that wish to employ technological advantages in a city must replicate the I MEF example of deliberate preparations that anticipate the duration and costs. The United States prevailed in Fallujah because it brought a robust force to the fight, conducted deliberate planning before the assault, built the political will in the Iraqi government to persuade the population to leave, and sustained the fight until the insurgents were destroyed. This urban battle was not the equalizer many had anticipated.

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WESLEY MOERBE

10

THEATER OF WAR

Combat and Performance in Gaza's Long, Postmodern War

REFLECTING ON HIS EXPERIENCES in Afghanistan, Emile Simpson wrote that "for [a] war's outcome to have purchase on people, they need to accept its meaning."[1] Simpson forged his argument in the mountains and deserts of Afghanistan, not the urban canyons of Gaza, where, this chapter shall argue, the density of human settlement and its international character amplifies the epistemological challenge of modern war.[2] Since 2006, Israel and Hamas militants have engaged in an urban, indeterminant, and postmodern war. It is postmodern in the sense that audiences endlessly interpret the war's meaning based on how the combatants perform warfare. No fact goes uncontested. Casualty figures, numbers of combatants, violations of cease-fire, and types of

weapons used become the centers of a struggle over what audiences should believe about the war. No meaning is final, and to gain an advantage both sides struggle to control the discourse about the conflict through authoritative images and truth claims. They have done so through ritualized, almost scripted, combat performances followed by elaborate postcombat maneuvering to convince audiences of their legitimate victory.[3] Gaza provided the stage and Israel and Palestine the actors in a grisly theater performance. The campaigns of late 2008 and the summer of 2014 best illustrate this violent storytelling. This chapter examines the performance of this ritual and how Gaza, as a stage with global audiences, extended the contest far afield, requiring belligerents to devise an international-minded strategy.

ISRAELI OPERATIONS IN GAZA

Map redrawn from Lessons from Israel's Wars in Gaza, RAND Report (Santa Monica, CA: RAND, 2017), available at https://www.rand.org/pubs/research_briefs/RB9975.html

THE STAGE: A LIVING TERRAIN

Pinned between two large deserts, Gaza spans the gateway between Africa and Asia. Consequently, ancient geopolitics was not kind to Gaza. Gaza's location along the old coastal road and its superb water supply made it the oasis city par excellence, bringing traders and merchants from both continents. It also made it an important stop for every army marching out of Egypt or from Greater Syria to rest and water troops before continuing the campaign. Its tormented history as a boundary region between great powers has continued, with few interludes, up to the present. Pharaohs, Hittites, Philistines, ancient Jewish kings, Greeks, Persians, Byzantines, and Romans have all at some time or another laid claim to Gaza, and in each case Gaza has reprised the role that geography chose for it: that of a crossroads territory, destined to feel the heavy hand of warfare.

If ancient geopolitics was hard on Gaza, modernity did not much improve its prospects. Gaza's sudden transformation from an ancient crossroads town of learning and trade into an overpopulated urban environment contained both the seeds and soil for the long Gaza War. The 1948 Arab-Israeli War created a refugee crisis that permanently altered the demographics and physical construction of Gaza. The population more than doubled in a few months' time, and the United Nations (UN) hurriedly constructed eight refugee camps to ameliorate a humanitarian crisis. The tents and shacks of refugee camps calcified into more durable dwellings but without municipal planning to integrate them into the Ottoman- and British-mandate period street patterns. This created a sharp demarcation between native Gazans and arriving refugees, a condition that persists, because in the Palestinian view, integration with the local population legitimizes the refugees' relocation as permanent, rather than as a temporary condition of an unjust war. The deepest resentment of Israeli occupation took root in these camps, where Gaza's streets and structures grew narrower and more labyrinthine. In effect, the most complicated urban terrain became home to the most committed resistance movements, preeminent among them, Hamas.

Although a marginal armed resistance group during the first Intifada, Hamas became both an armed militia and a ruling political party after the 2005 Israeli unilateral disengagement from the Gaza Strip. Hamas battled and defeated the rival Fatah party, first at the ballot box and then in the streets of Gaza, and by 2007 had established unchallenged rule over the Gaza Strip.

ACT I: THE BATTLE OF AL FARQAN, OR OPERATION CAST LEAD

The 2006 Hamas kidnapping of Israeli Defense Forces (IDF) soldier Gilad Shalit brought Israeli-Hamas tensions to a simmer. In the winter of 2008, the chief of Hamas' Political Bureau, Khaled Meshal, dramatically escalated tensions with his public declaration that "the calm" only served Israeli interests and that Hamas would return to the path of resistance.[1]

Escalation

In December 2008, the building tension finally broke—with a vicious twenty-two-day campaign fought in Gaza's narrow streets and alleys. In this initial conflagration at least two thousand fighters of Hamas' Ezz al Din al Qassam Brigade (EQB), augmented by up to 15,000 affiliated security police and several smaller militias, engaged the IDF in their first major close combat action.[11] As in most Arab-Israeli wars, the naming of military operations constituted one of the first strategic decisions either the Israeli or Palestinian side made. Hamas chose to call the operation the Battle of Al Furqan, a reference to the 25th Surah in the Qur'an, wherein Prophet Muhammad urged Meccan unbelievers to accept the Qur'an as the criterion for distinguishing good from evil.[12] The name of the battle conveys a theme: those who fight against outnumbered believers, as the pre-Islamic Meccans did, suffer grave consequences. Hamas' choice of name evoked the authority of the Qur'an and simultaneously urged audiences to support the outnumbered but righteous.

The Israeli name for the operation, Operation Cast Lead, also evokes religiosity, but for Hebrew speakers. It recalls a line from a children's poem about Hanukah. But the English translation that much of the world knew and by which people constructed their understanding of the campaign, smacked of aggression.[13] Moreover, it suggested a reforging of Israel's armed forces. The Israeli Defense Forces had suffered a blow to its prestige in the 2006 war with Hezbollah, which had skillfully exploited images of apparently victorious Hezbollah fighters erecting flags above their strongholds and stalling Israeli attacks.[1] This constituted a strategic problem for the IDF, which believed its reputation formed the bulwark of its deterrence strategy. If damaged, that reputation had to be restored, and that restoration required overwhelming victory. "Cast Lead," then, portended aggressiveness and renewal for English-speaking audiences. In practice this meant dealing EQB a crushing blow and defeating its offensive capabilities.[1]

Air Phase

When the first Israeli bombs of the campaign struck their targets at 11:30 in the

morning on December 27, Israeli Air Force (IAF) officials optimistically assessed near-total surprise; yet for the amount of combat power concentrated into the first few minutes of the air campaign, the initially reported number of senior Hamas officials killed appeared small.[1] A year after the campaign, in the first authentication from Hamas, a spokesman admitted, "On the first day of the war, Israel targeted police stations and 250 martyrs who were part of Hamas and the various factions fell."[1] In the final assessment, it seems likely that Hamas had been unprepared for the ferocity and scope of the opening air strikes but did not suffer total paralysis.

From December 27 to January 2, the air phase of Operation Cast Lead continued unabated. The IAF benefited from a comprehensive intelligence picture, blending human and signals-based intelligence to build a list of some 450–600 targets. Shinbet, the internally focused Israeli intelligence agency, helped move this process along with timely human intelligence, a marked improvement over the 2006 war in interagency cooperation.[1] By the second day of operations, the Israeli navy had added its fire to the operation and had begun conducting missile strikes against targets in the northwestern portion of the Strip. Israeli forces took advantage of the ease with which Gaza could be isolated by land and sea, covering its entire breadth with indirect fire meant to disrupt command and control, diminish rocket fire, and disorient defenders in advance of a ground incursion.

After several days, returns from the air campaign diminished. Although initially disrupted, it became apparent that Hamas did have an effective network of bunkers and tunnels protecting senior leaders from the intelligence-driven strikes. Their targets had hastened to occupy them and in the process had placed the civilian population of Gaza between themselves and the IDF. This was not happenstance. Hamas prioritized survivability of its strategic leaders, who would be harder to kill if embedded among, or in this case literally under, the civilian population.[1] Documents captured during the fighting as well as public statements by the Hamas leaders made clear that Hamas would take advantage of civilians on the battlefield to mitigate its conventional weaknesses vis-à-vis the IDF.[2] The combat was not yet a week old, and already Hamas had prepared for future battles of perception in the long war.

Air-Ground Phase

By January 3, the Israeli High Command had determined that it had reached the limits of what could be accomplished with standoff capabilities. A "knockout" blow could not be delivered by air; Hamas mortars and rockets continued to fall. EQB and its allied militias launched as many as five hundred rockets during the air phase of the war, making it obvious that only by ground incursion could the IDF expect to root out the network of rocket and mortar teams supporting EQB. Consequently, the ground forces of the IDF assembled for a division-sized operation focused primarily on Gaza City, in the north. The Israeli Southern Command served the function of a joint headquarters to coordinate the overall operation. The Gaza Territorial Division held tactical control over six brigades:

Givani, Golan, Paratroopers, 401st Armored, and two territorial brigades that would provide the ground component of the operation.[21]

The Israeli plan called for waves of simultaneous penetrating raids that would overwhelm Hamas' capacity for response, an operational approach Sergio Cantignani describes as "diffused warfare."[22] In practice, this required the Givani, Golani, Paratroopers, and 401st Armored Brigades to isolate Gaza City, establish a foothold outside the urban center, then launch calculated rapier thrusts into the city to destroy EQB infrastructure, rocket launchers, weapons caches, and the tunnels that enabled Hamas to reposition fighters and material with impunity.[23] The balance of Israeli forces would secure lines of communication, block enemy reinforcements, and provide additional combat power as needed. Through this process planners expected to generate further intelligence to support subsequent attacks intended to destroy systemically Hamas' offensive capability and defeat its field forces. Any seizure of terrain would be a temporary expedient to enable the destruction of enemy forces, rockets, or supporting infrastructure. Once all this had been done, IDF units would withdraw to their larger encampments, refit, and prepare for renewed operations.

Hamas' plan for the Battle of al Furqan envisioned an area defense combined with dogged rocket and mortar attacks into Israeli territory to demonstrate the impotence of the IDF in eliminating Hamas resistance. The area defense began with a disruption zone near the 1949 boundaries of Gaza.[2] Here the IDF could expect preregistered (in effect, pre-aimed) mortars, mines, and improvised explosive devices (IEDs). The next belt, a few kilometers deeper into Gaza, anchored the defense on the outskirts of Gaza City. Here, the IDF would encounter more elaborate engagement areas, with snipers, suicide bombers, and antiarmor ambushes sited along main avenues of approach. A final belt of defenses deep into the urban areas protected the most senior Hamas officials with booby-trapped houses and tunnel systems.[2] With the 2006 Hezbollah War as inspiration, the EQB hoped to create an "image of victory" by bogging down an Israeli advance into a bloody slog, which external audiences would perceive as futile and criminal—against the background of a discourse Hamas intended to dominate.[2] Hamas would do so through shrewd use of media to propagate images of burning tanks, dead or wounded IDF soldiers, and noncombatant casualties inflicted by Israeli attacks.

The Street Fight

Despite Hamas' extensive preparation and confidence, its tactical plan did not remain intact long. For such a plan to work, Hamas needed to fix or at least disrupt attacking IDF columns as they maneuvered into Gaza, thereby allowing EQB fighters to ambush them, attack by fire, and melt away before Israeli forces could respond. However, on January 3, as the IDF crossed the line of departure, artillery barrages to a great extent cleared or destroyed Hamas' prepared fighting positions, weakening its outer defenses; when IDF attack columns lunged across the Gaza border, Hamas IEDs proved too flimsy an obstacle. Far from miring IDF columns in a fight for every inch, EQB fighters failed even to slow the

pace of the Israeli advance during the opening hours of the ground phase. After penetrating the disruption zone and quickly isolating Gaza City, the IDF moved to seize attack positions within the Strip to use as staging areas for raids deeper into the city.

Crucial to EQB's area defense were webs of engagement areas, some of which showed an impressive degree of professional planning.[2] The narrow streets and the ad hoc construction of the refugee camps and the surrounding neighborhoods made the urban terrain a complex one, familiarity with which gave EQB the inherent advantage of the defender in such a case. But now Hamas was already defending from its second belt of obstacles and engagement areas, avoiding sustained direct fire and, when engaged, breaking contact through tunnels.

The IDF operational approach maintained a feverish tempo and generated unexpected directions of attack, preventing Hamas from using its well-prepared defenses. In essence, the IDF reconfigured the urban terrain to suit its tactical needs.[2] IDF task forces augmented with D9 combat bulldozers created pathways between, and even through, structures, bypassing the routes Hamas fighters had carefully mined and prepared for ambushes. But there were limits to what could be bulldozed, and in any case Israeli casualties were not eliminated. By January 4 the first IDF soldiers had been killed in close combat, and on the following day the Golani Brigade commander was injured during a fratricide incident resulting in three IDF fatalities and more than a dozen injuries.[2]

On January 6 a mortar duel that quickly became controversial unfolded near a United Nations Relief and Works Agency (UNRWA) school where hundreds of civilians had sheltered. The veracity of reporting on and the meaning of these events would be hotly contested by both sides. During this fight an IDF mortar team attacked an EQB counterpart operating near the UNRWA school complex; the result was a disputed number of civilian casualties, UN reproach, and precisely the optics that Hamas had hoped to create: noncombatants targeted despite their protected status.[3] This was the most public of many accusations of disproportionate and indiscriminate force leveled at IDF troops. For its part, the IDF had taken steps to warn civilians. But these warnings occurred under the shadow of a violent campaign unfolding in a dense city filled with ununiformed combatants and civilians. Persuading external audiences that a good-faith attempt had been made to avoid civilian casualties proved to be a herculean task. Far more convincing were IDF improvements in tactical acumen.

The EQB and the terrain still hid many surprises, a problem the IDF had foreseen and now addressed through flexibility. Operation Cast Lead served as a test of recent IDF reforms that manifested themselves largely in versatility of task organization down to the lowest echelon possible. Post–Lebanon War reports had lamented the centralization of air capabilities at the highest headquarters, so for Operation Cast Lead each brigade headquarters received its own tactical air liaison officer.[31] As a result, rotary-wing and fixed-wing air support were incredibly responsive. Unmanned aerial vehicles (UAVs) provided to brigade

headquarters enabled advancing IDF formations to peek around every corner and observed indirect fire. Additionally, given the successive obstacle belts prepared by the EQB, every IDF advance had to involve specialized breaching equipment or risk losing the initiative, as EQB had hoped. The IDF was prepared for such an eventuality; it had placed armored bulldozers and mine-clearing equipment with advancing columns. Concerned by Hamas's stated aim to capture Israeli soldiers, Southern Command assigned military working dogs to the lowest levels to enter buildings and locate enemy combatants, limiting soldiers' risk of isolation and capture.[32] Without placing its soldiers in jeopardy, augmenting units with working dogs could address two tactical problems at once: sniffing out bombs and locating hidden EQB fighters attempting to ambush or capture Israeli soldiers. Flexible task organization also made room for tactical innovation.

Foreknowledge of Gaza's urban engagement areas prompted IDF task forces to repurpose for urban combat not only conventional equipment (bulldozers, mine-clearing equipment) but weapons. To mitigate the difficulty of target acquisition in the concrete canyons of the city, stabilized gun platforms paired with ballistic sensors enhanced the speed and accuracy with which fire from Hamas fighters could be returned. To present only fleeting targets to Hamas fighters, the IDF conducted most operations at night. All the while, the IDF enjoyed the constant support of the IAF, which flew well over two thousand sorties during the campaign. The persistent presence of airpower combined with fast-moving ground forces made EQB maneuvers risky, with effects that began to tell on militant squads and rocket teams. After fourteen days of combined air-land combat, rocket fire had slackened considerably.[33]

On the other side of the street, as it were, Hamas fighters lost the initiative early on, in part because they could not effectively use their weapons in their intended engagement areas.[3] If Hamas fighters were armed with antitank guided missiles, as some sources have suggested, they rarely brought them to bear during the Battle of Furqan.[3] Consequently, they very seldom seemed able to slow or defeat the advance of combined armor/infantry teams supported by indirect fire and UAV surveillance. If Hamas chose not to employ guided antitank weapons, what tactical answer did they offer for IDF armor? Sources report use of the RPG 29, an unguided antiarmor weapon, but few successful engagements.[3] The absence of a guidance system and relatively short range of that weapon meant that Hamas could not engage at the distances that advanced antitank (AT) weapons afforded, and if fighting at night, the RPG 29 would be even more difficult to employ. Possibly Hamas saw the RPG 29 as a close-quarters alternative, but its fighters were not often willing or able to get into close combat with the IDF, since night engagements put them at extreme disadvantage. Given this problem, EQB had no effective means of countering swarms of Israeli combined-arms teams scything through Gaza streets.[3]

By January 11, Israeli reservist units that had been called up early in the conflict were beginning to arrive in assembly areas near Gaza. The delay in their de-

ployment had been a choice: to permit a deliberate mobilization, familiarization with equipment, and a brief training period in which to sharpen skills before committing them to battle. The commitment of the reserve brigades allowed a relief-in-place of regular army brigades, freeing them to press deeper into Gaza without the burden of defending already cleared terrain.[3] After ten days of constant raids, the arrival of fresh soldiers must have been very welcome to the active-duty brigades already engaged and deeply concerning for Hamas fighters already defending from their third and final belt of defenses deep in the city. Indeed, the number of Hamas fighters captured late in the fighting suggests a serious morale problem.[3] But, consistent with most Palestinian-Israeli violence, external pressure on Tel Aviv to reach a cease-fire could not long be ignored, and by most measures the IDF had already accomplished its military aims. In two weeks of air-ground combat, it had killed several high-profile Hamas leaders and achieved a steep decline in rocket fire. Prolonging the campaign could only lead to increased Israeli casualties and a reframing of the campaign that would favor Hamas. Occupation of the city meant relative immobility, and many policymakers and senior IDF officials knew that immobile forces in a city made vulnerable targets. By January 19, a durable cease-fire was back in place. [1]

The Postcombat Phase

Although he claimed a Hamas victory after the cease-fire took effect, Gaza's prime minister, Ismael Haniyeh also signaled his relief that the fighting had stopped. [2] He had no delusions of a tactical success, whatever the propaganda value of claiming one might be. The combat results were hard to "spin." Even inside Hamas, some leaders were critical of the declaration of victory. Ghazi Hamad, a Hamas cabinet official, argued against such bombastic crowing, lest Hamas come to believe its own propaganda. In an article on a popular Palestinian news site he wrote, "We do not want emotions and pompous slogans to push aside and take the place of facts, robbing them of their power to persuade [us] and to change the painful reality. Emotion and excitement, slogans, raucous voices, and rallies cannot create real victory—[only] an illusory victory." [3]

Perhaps Hamad was referring to the "Victory Festival" held in Yarmouk Refugee Camp in Syria some four months after the fighting. In this celebration a variety of speakers made grandiloquent claims that "Hamas' constant rocket attacks on Israel throughout the war were proof of its victory," that the current generation of Israelis "cannot withstand [the hardships] of battle," and that "we have triumphed and thwarted their despicable goals." The Damascus audience's reaction receives no mention in the Palestinian press coverage, but it is notable that the celebration took place far from the smoldering ruins of Gaza.

In the weeks after the cease-fire, reporting from within Gaza suggested near-anarchic conditions. Rule of law had all but evaporated, and essential services were in shambles. In this moment Hamas thrashed about, targeting known or suspected Israeli collaborators and Fatah supporters with equal ire. PLO Executive Committee secretary Yasser Abd Rabbo made television appearances on Al Jazeera and Al Arabiyah lamenting the "gangs" of Hamas henchmen who

had taken over public buildings and converted them into torture and detention centers. An April 2009 Human Rights Watch report confirmed substantial intra-Palestinian political violence in the Strip both during and after the Israeli ground campaign.

Yet for all its operational ineptitude and internal factionalism, Hamas showed remarkable resilience and foresight, continuing to maneuver through the epistemic battlefield even as the guns fell silent. Hamas' political echelon used Gaza's high visibility as an international city to amplify its humanitarian crisis. The IDF had closed off Gaza to the press, but Hamas welcomed them. And when the UN dispatched an investigative body to ascertain the veracity of war-crime allegations, Hamas sensed opportunity and embraced this as an instrument of narrative production. The Israeli government, on the other hand, blundered by refusing to cooperate. Predictably, the Goldstone Report that resulted then propagated much of Hamas's narrative across the international community. Justice Richard Goldstone's essential finding asserted that Israel had systematically and deliberately targeted civilians. The UNRWA school incident on January 6 figured prominently in this conclusion. Goldstone himself would recant the report's findings, lamenting that if only the Israeli government had cooperated with him the report would have better reflected its point of view. But that acknowledgement appeared two years later; in the immediate postcombat phase, the report gained Hamas some external support, or at the very least cast doubts on the Israeli version of the war.

For an organization soundly defeated in the field, Hamas managed its audiences well in the postconflict phase. No less a Middle East scholar than George Fawaz noted in a 2009 Los Angeles Times editorial that despite its reckless provocations, Hamas had established itself as legitimate enough that the Israelis could not afford to treat it as a mere terrorist militia. [1]

Hamas continues to fight the Battle of Farqan. In December 2020, Hamas made a statement commemorating the combat. As a piece of state propaganda, several of its assertions seem detached from reality. For example, "Once the Israeli occupation army realized that a large number of its troops might be killed in the battle, it backtracked on this hypothesis and was deterred from getting engaged in direct clashes with the Palestinian resistance." [2] Commemorations of this sort are emblematic of the postmodern war unfolding between Gaza and Israel, wherein understandings of events can be revised through frequent acts of reinterpretation. These "barrages" carry ideological payloads intended to crowd out the adversary's narrative of the campaign and dominate the discourse.

Yet for all their clever management of the postwar phase, events would soon completely upset the political calculations of Middle East actors. Beginning in 2010 the Arab Spring surprised even the most astute Middle East scholars and refashioned the landscape of regional politics and society. The next few years saw the toppling (in 2011) of the anti-Hamas Egyptian ruler Hosni Mubarak and his replacement as president by the Islamist Muhammad Morsi. Morsi would reverse much of the former regime's antipathy toward Hamas and limit

Egypt's cooperation with Israeli military operations. Hamas felt its fortunes were changing—and for moment, they had. In November 2012, Israel launched an air offensive. Operation Pillar of Defense, against Gaza in hopes, yet again, of reducing rocket fire and damaging the tunnel smuggling network that enabled it. Again, both sides would claim victory after the ten-day campaign, but this time Hamas was left in an improved political position and the Israelis without much to show for their efforts. Hamas' fortunes reversed once more, however, when in 2013 the unpredictable winds of the Arab Spring brought Abdel Fattah Al Sisi to power in Egypt in a coup that overthrew President Morsi. Al Sisi reinstated a blockade of Gaza and decisively shut down the tunnels through which much of Gaza's licit and illicit supplies moved. By early 2014, Hamas faced strangulation and a crisis of legitimacy as the ruling political body of Gaza. [3]

ACT II: OPERATION PROTECTIVE EDGE, OR EATEN STRAW

In August of that year, the next act of the Gaza War began. Israel improved its naming strategy, settling on Operation Protective Edge, a codename intended to connote a defensive operation but one carried out by well-trained troops. It suggested precision and seemed to respond to criticism of indiscriminate shelling. Hamas returned to the Qur'an for inspiration and plumbed the 105th Surah, which recounts an attack against Mecca by an Ethiopian king. In it, the king attacks with war elephants, but Allah sends birds to pelt them with stones, rendering the aggressors "straw eaten up," a suitable, if wishful, metaphor for Israeli armored columns attacking into Gaza.

Stretching out to fifty-two days, this longest of the Gaza campaigns began much like its predecessors: an air phase followed by a combined air-ground phase. But it would take another period of aerial attacks, the second after IDF troops withdrew, to bring each side to a durable cease-fire. Here again, both sides would leverage the conditions created by the combat phase to establish control over the way the campaign was reported, discussed, and understood so as to persuade audiences of their respective legitimate victories. In the now-familiar pattern, after the guns fell silent the courtship of respective domestic and external audiences unfolded, in investigations, public statements, recriminations, reconfigurations of alliances, and after-action reviews.

Escalation

For Hamas, Operation Eaten Straw began as a tragedy of errors. Politically isolated by the mercurial dynamics of the Arab Spring, in 2013, Hamas had negotiated for reconciliation with the Palestinian Authority from a position of weakness. On June 12, 2014, another Hamas-connected kidnapping incident took place, this time ending in the murder of three Israeli teenagers. It appears this crime had not been directed by or coordinated with Hamas political leadership; regardless, it put Hamas on a trajectory for renewed war with Israel. Under these circumstances, Hamas felt it had no recourse but war with Israel to prevent its own absolute ruin. Although counterintuitive, there is a logic to

this position. Hamas was unable to pay salaries, almost totally isolated from its usual patrons, and its population was restive: all this made Hamas feel that the status quo would certainly lead to its collapse but that a war with Israel might bring on a political change that would break its isolation, garner aid from the international community, and—as often happens for wartime—perhaps rejuvenate its internal support.

Combat Operations Resume

Combat operations unfolded in three phases. The operation began as an Israeli air campaign meant to minimize IDF casualties in the next phase, or even, by heavy use of airpower, so weaken Hamas leadership, rocket teams, and fighters that Hamas would accept a cease-fire in the first phase. But the IDF would be unable to replicate the surprise of Operation Cast Lead, and leadership targets would go to ground too quickly to paralyze Hamas. Israeli airstrikes opened Operation Protective Edge on July 7 after fire from Gaza had grown from two or three rockets in a day to dozens. Twenty-four hours later the IDF thwarted a team of EQB naval commandos who swam to shore near the Kibbutz Zikom with the apparent aim of attacking it. Although the EQB's attempted raid was bold and potentially disastrous for the intended target, it did not stimulate an IDF ground incursion.

For nine days the IAF attempted to punish Hamas leadership and disrupt the rocket offensive as the IDF mobilized to signal the legitimate possibility of a major land operation, while hoping to avoid it. It might have gone on this way for days or weeks of stalemate, but another unsettling EQB infiltration via one of its offensive tunnels shattered the torpor among Israeli civilians and policymakers. On July 17, the IAF intercepted a team of EQB fighters emerging from a tunnel near another Israeli kibbutz, in Sufa. This team was well armed, and intelligence suggested a much more chilling EQB plan to raid the civilian village, capture whom they could, and kill those they could not. This thwarted Hamas operation made clear that the Iron Dome air-defense system and air strikes were insufficient to maintain Israeli security. [1] Most concerning was the subterranean dimension, which severely undermined the IDF's ability to anticipate offensive threats; the tunnels presented to military planners an "unknowable cartography." [2] Unable to chart this underground wilderness, the IDF decided it had no alternative but to mount a ground operation to root it out. [3]

Concerned at the scale, sophistication, and institutional growth of EQB since 2009, for Operation Protective Edge the IDF task-organized eight combat brigades under three divisions for a limited operation around the margins of Gaza. The 162nd Infantry Division was to cover northern Gaza while 36th Armored Division, the main effort, attacked Gaza at the "waist" and into the southern portion of Gaza City. The 643rd Infantry Division took responsibility for the southernmost zone, which included Rafah. Hoping to avoid being pinned down in costly house-to-house fighting, the IDF restricted its goal to neutralizing the tunnel threat. Tunnels in Gaza were nothing new, but only

after the thwarted attack against the Sufa kibbutz had the IDF realized their high degree of sophistication and the possibilities they offered for offensive operations. Crossing into Gaza on July 17, the IDF conducted a limited ground offensive to locate and destroy tunnel entrances until early August. Being thus uncertain of the enemy situation, the IDF planned a search-and-attack operation stretching from the Gaza border fence to a depth of three kilometers. This allowed the IDF to avoid becoming fixed deep inside Gaza City and to keep the operation focused on the tunnels that crossed into Israel. Simultaneously, air strikes would be continued to disrupt Hamas forces from maneuvering against the ground effort and to challenge rocket and mortar teams still firing into Israel.

In the event, in a reverse of Operation Cast Lead, it was the IDF that suffered operational surprise during the land operation; it would have to make good on its reputation for adaptability during its search-and-attack operation. Also, the IDF faced a more-prepared coalition than it had in Operation Cast Lead of militant guerrillas fighting under Hamas' banner. The fiercest fighting occurred in neighborhoods near the threekilometer limit of advance. Here Hamas prepared nests of mutually reinforcing fighting positions, IEDs, and overwatching snipers. These positions were well hidden in areas so dense that one IDF soldier said, "It's not like any normal city, where you'll see a building next to another building and there's a space between them. It looks like one fused layer."

From July 19 to the 20th a particularly vicious battle unfolded in Shujaiyah, the most densely settled neighborhood in Gaza. Early in the fighting EQB fighters struck an IDF vehicle with an antiarmor weapon, killing seven. EQB fighters captured the body of one IDF soldier; the ferocity of fighting in the Israeli attempt to recover the soldier's remains and the destroyed vehicle produced the most casualties in a single day of fighting during the campaign. Normally protected sites like schools and mosques became the scenes of intense fighting after IDF soldiers reported enemy activity in and among them. This included the Al Waqf Hospital, which served as a command post for EQB fighters, as well as UNRWA facilities that had been used for weapon and munition caches. Fighting continued unabated near the hospital, where Hamas fighters were using structures for command posts and rocket launch sites. [1]

The intensity of land operations surged again on August 1, this time in Rafah, when 2nd Lt. Hadar Goldin and two IDF soldiers were killed during an EQB attack on their position. Goldin's body was captured and carried away through a tunnel. It would take authorities two days to determine that Goldin had been killed during the attack. Meantime, not knowing his fate, the Govani Brigade commander initiated the controversial Hannibal Directive, a set military response when soldiers are believed to have been captured. [2] There followed a barrage of unparalleled ferocity, scores of batteries firing at the highest possible rate on preplanned targets to prevent the escape of the capturing force. [3]

By August 3, although EQB rocket fire continued, the IDF was satisfied it had achieved all that was possible by ground forces, having located and destroyed

thirty-two tunnels, and it began withdrawing troops. The IDF withdrew completely by August 5. In total, nearly two thousand Gazans were killed during the ground phase of the war, but like all other aspects of the campaign, the proportion of combatants versus noncombatants remains hotly contested. For its part, Hamas had inflicted sixty-six casualties, frequently by exploiting its tunnel network, wearing captured IDF uniforms, or hiding among the populace.

Waging Information War

Hamas carried out diverse and sophisticated information operations during Operation Eaten Straw. Official social media accounts and media outlets streamed content in Arabic, Turkish, English, and Hebrew, in versions customized for the anticipated audience. Arabic media emphasized the prowess and martyrdom of its fighters, while English- and Hebrewlanguage sites focused on civilian casualties and Israeli aggression.

Revealing its growing maturity in information warfare, Hamas launched a public-awareness campaign for its sympathizers, tips on what to post and what not to post. Analysis of these guides indicates the importance of maintaining victimhood: "Always call civilians innocent"; "Don't show rockets being launched"; "Start every post with, 'In response to the Israeli attack.' "

Activists replied to Prime Minister Benjamin Netanyahu's assertion that "the entire Arab world is against Hamas" by launching a social media campaign with the hashtag "#WeAreHamas." The Hamas mouthpiece, the Palestinian Information Center, or PALINFO, published an article on August 21, 2014, claiming that for a time the hashtag commanded the highest number of tweets among Twitter users in Arab countries and the second-highest across the world. If this claim exaggerates the appeal of Hamas, it cannot be denied how critical Hamas believes public opinion to be in its fight with Israel.

Hamas took steps to promulgate a more legitimate image and to undermine the narrative that it was nothing more than a militant terrorist group. The official statements published by EQB on its English website framed their rocket offensive as attacks against Israeli military bases and even issued warnings to civilians of areas they should avoid—in effect, mirroring Israeli efforts to show they had taken steps to minimize civilian casualties. Even posters honoring Hamas' martyrs show them posing in uniform for standard photographs, similar to how American media might honor a U.S. service member killed in action.

Israeli aircraft dropped thousands of leaflets warning Gazans of an impending attack and urging them to leave their homes. It would have been difficult to deny the physical evidence of these leaflet drops, but Hamas in some cases took the approach that they constituted psychological warfare against the population. [1] The same source discussed other instances of tit-for-tat psychological warfare wherein each side managed to hack temporarily the feed of the other's news channel long enough to broadcast on its own message to the enemy population. Hamas, instead of dropping leaflets, sent text messages to the phones of Israeli civilians. Some messages were threatening; others, purportedly from Israeli

intelligence services, were intended to sow fear by claiming that a suicide bomber was on the loose and could be anywhere among them. [2]

In the pursuit of operational security and to craft the most convincing narrative possible for the intended audience, Hamas' Ministry of the Interior provided to its operatives helpful advice via its Facebook and YouTube channels:

The narrative of life vs. the narrative of blood: [When speaking] to an Arab friend, start with the number of martyrs. [But when speaking] to a Western friend, start with the number of wounded and dead. Be sure to humanize the Palestinian suffering. Try to paint a picture of the suffering of the civilians in Gaza and the West Bank during the occupation's operations and its bombings of cities and villages.…

Avoid publishing pictures of rockets fired into Israel from [Gaza] city centers. This [would] provide a pretext for attacking residential areas in the Gaza Strip. Do not publish or share photos or video clips showing rocket launching sites or the movement of resistance [forces] in Gaza. [3]

When under attack, Hamas prioritized reconstitution of its social media capabilities. If an account was shut down by media watchdogs for inciting violence, another account quickly took its place. For instance, EQB was back on Twitter a week after having been taken off, even indulging in a bit of free-speech shaming when it reappeared.

But moralizing about free speech was taken only as far as it supported the Hamas struggle for epistemological advantage. During an August 14 television interview, Isra al Mudallal, a spokeswoman for the Hamas Ministry of Information and presumably not likely to make an errant statement, mentioned that her ministry deported foreign journalists whose stories included images of Hamas rockets firing into Israel, which she characterized as collaborating with the enemy. It is important to note here that she did not mention any operational security concerns. The worry she expressed was about the image of rockets being fired, especially from population centers. Since militants frequently film themselves firing rockets, the problem was being seen by others as taking offensive action per se, particularly, we can infer, firing a rocket from or near protected sites.

Hamas public statements reveal a shrewd understanding of what is at stake in the information domain. Talal Nassar, a senior Hamas official, charged that "Israel is carrying out its aggressions and crimes against the Palestinian people in coincidence with its attempts to rebrand itself as victim in front of the international community," revealing that both sides appear to view the victim narrative as key terrain. Legitimacy with the international community can be greatly enhanced by seizing and dominating it.

Ending the Combat Phase

As the information war raged on social media and television broadcasts, both sides struggled to end the combat at an auspicious moment. A third phase,

of continued air strikes and standoff attacks, lasted until late August. The remaining twenty-three days of combat were a cycle of cease-fire proposals, accusations of violations, resumption of standoff strikes, and another cease-fire proposal. This process of conflict termination became a dialectic of symbolic violence and political demands. At this stage of the fighting, high-value or symbolic targets not previously attacked took center stage. On August 19 the IAF targeted Mohammad Dief, the commander of EQB, killing his wife and two children but leaving him untouched and prompting both a taunting message from the EQB and a declaration of martyrdom for his family. Two days later IDF ordnance killed three senior EQB officials in Rafah, and with Israeli officials signaled that more such attacks would follow if Hamas refused another cease-fire. Notwithstanding official EQB statements extolling martyrdom and emphasizing its own resilience, these attacks clearly stung. The Rafah strike set EQB officials to worrying that internal defections had compromised their security and provided intelligence the Israelis could use for a decapitation strike in the last stages. The EQB responded to its suspected insider threat by the very public summary execution of eighteen accused collaborators the next day. Combatants on both sides knew that the publicizing of a major military achievement, an "image of victory," just before a cease-fire amplified its effects, and in a way gave that side the last word on the combat phase.

But it was the strategic timing of this mass execution that is notable, not the fact. Throughout, Hamas—as if it did not have its hands full with the IDF air-ground campaign and its own rocket offensive—had been conducting a parallel campaign to defeat, uproot, and punish competitor factions and collaborators. [1] By design, many of these extrajudicial killings were captured by Hamas' localized media. [2] Indeed, frequently this campaign was rather public, as in the aforementioned case. It is difficult to know how many of these killings were settlings of scores with Fatah sympathizers and how many were retributions for treason against the Hamas regime. In either case, it appears to have been a public relations mistake, earning comparisons to the brutal public executions of Islamic State. [3]

The cease-fire that finally held, on August 26, was nearly identical to that proposed on July 15, which Hamas had rejected. The reason for its change of heart remains unclear, but attrition of Hamas forces and a loss of confidence in its ability to mobilize regional sympathy seem likely factors. Whatever the actual rationale, it did not prevent Hamas leaders from claiming a victory.

Postcombat Operations

The destruction wrought by Operation Protective Edge provoked self-examination in Gaza, a surprisingly public debate about Hamas' strategic decisions. The open sparring between Hamas elites suggests deep disagreement over the choice to confront the IDF directly. Some worried that Hamas had come to believe its grandstanding propaganda and had brought costly defeats on itself. Still, Hamas closed ranks for the phase of maneuvers that followed the cease-fire.

Constructing a narrative of tactical triumph would be difficult given the pounding the EQB had just received; Hamas would have to focus on its enemy's performance rather than on its own. Thus, Hamas challenged the Israeli narrative of just and proportionate application of force, citing statements collected by an Israeli nongovernmental organization, B'tselem. These statements were drawn from interviews B'tselem had conducted in a "Breaking the Silence" campaign, and they purported to reveal an IDF whose leaders encouraged the indiscriminate use of force—a gift for Hamas officials hoping to persuade Western audiences that Israeli behavior had been criminal.

Simultaneously, Hamas mobilized media to minimize the IDF's military accomplishments. To undermine Israeli claims of severe destruction to military infrastructure, Hamas' mouthpiece, Al Risala, took great pains to persuade the outside world that, yes, tunnels had sustained damage in the IDF's attacks, but Hamas was already hard at work repairing some tunnels and digging new ones. The message was clear: for all its high-tech weaponry, the IDF could have no way of knowing how many tunnels remained, how quickly Hamas could complete others, or when another team of EQB commandos might emerge from one to attack again.

Nonetheless, in the wake of Operation Protective Edge Hamas did not seem altogether confident that other journalists' reporting would support its narrative. Despite its shrewd efforts at transparency in previous conflicts, by the fall of 2014 Hamas had grown so concerned with conflict reporting in the Gaza Strip that it embarked on a systematic campaign to cajole, pressure, and coerce Palestinian journalists into producing stories that supported its version of events. This concerted effort, as evinced by deportations and jailings of journalists, had the effect of generating self-censorship and resentment.[1]

If Hamas had intended Operation Eaten Straw to upset the status quo, lead to economic relief, and restore, both internally and externally, its credentials as a resistance group, the Gazan mood a month after the fighting showed it had not conclusively done so. While Gazans likely felt euphoria after the Israeli withdrawal, once confronted with the stark reality of rebuilding after so much destruction and with such small resources, their attitudes turned against Hamas; a month into the cease-fire, the number of Palestinians who believed that Hamas had won the war dropped by 10 percent, from 79 to 69 percent, and Palestinian satisfaction with the accomplishments of the campaign compared to its losses dropped from 59 to 49 percent. Ismail Haniyeh, leader of Hamas' Political Bureau in Gaza, saw his support diminished there, not a favorable sign for a wartime political leader.

INVESTIGATIONS, COURTS, AND INTERNATIONAL LAW

A year later, epistemological maneuvers continued as both sides fought for the legitimacy of jus in bello, the body of international law addressing the manner in which a war, once begun, is waged. Given the high number of casualties and the high visibility of the fighting, another UN panel investigation was in-

evitable. And, inevitably, both Hamas and Israel found the report's findings objectionable.[1] [1] Again the report lamented its limited access to the Gaza Strip, enforced by the Israeli government, but also, this time, noting the trouble of gathering truthful statements from within the Strip because of threats from Hamas officials. It was perhaps the inevitable dissatisfaction with the entire process that led the Israelis to complete their own official report in May 2015 and also to enlist an international panel of senior military officers, the "High Level Military Group," to produce an independent report of its own that October.[1] [2] The findings of both were, unsurprisingly, supportive of Israeli efforts to minimize suffering, and both pointed out the asymmetric expectations and standards to which the IDF was held, compared to Hamas. Given its access to the Gaza Strip, to military records, maps, and personnel, the High Level Military Group constructed a well-supported case. With the Palestinian Authority having achieved observer status in the International Criminal Court, Hamas has mounted loud and frequent calls for prosecution of Israeli officers and officials for war crimes in the 2014 campaign.[1] [3] An ICC probe was initiated but was soon, and remains today, mired by inefficiency, allegations of bias, and uncooperative belligerents.[1]

LESSONS LEARNED

The interrelationship between Israelis, Palestinians, and the land is freighted with the baggage of a century of conflict and complicated by millennia of weaponized memory, all of which creates hazards for those seeking to generalize lessons from this particular conflict. Still, the long war in Gaza suggests that certain trends in urban warfare may be extrapolated outside of the Palestinian context and ought to attract our attention. Israel, after all, shares political, cultural, and technological attributes with Western militaries. Their adversaries are as complicated as any the U.S. joint force has faced and, like most substate actors, have legitimate grievances. The terrain of Gaza, unique though it is, can serve as a thought experiment for a force hoping to subdue an urbanized, substate militia that fights among its civilians.

First, epistemological competition constitutes the central strategic challenge in small, urban wars. While never absent from war, epistemological competition has accelerated in the information age and becomes more prominent in the urban setting, where combatants coexist with so many civilians. Images of victory and domination of discourse propel the narratives that persuade intended audiences that one has achieved legitimate success, a feat possible even when completely defeated in the field. In another age, perhaps it would be enough to destroy the capacity for armed resistance in Gaza to compel the population to accept defeat. But no longer can we assume that enemies or other audiences will accept that they are vanquished. Assumptions about truth face new tests. Competitors seek to change belief by influencing the manufacture of truth. Propaganda and deception certainly figured into war plans in the past, but now epistemological combat takes center stage, not as a supporting operation but as the main effort.

As such, even the most powerful states need competence in this postmodern

form of war. Traditionally, campaign planners have believed that successful operations begin with a clearly defined end state; however, today they must begin with the story they wish their audiences to accept. This forms the metanarrative of the campaign plan, into which targeting and tactical engagements must fit if the story is to cohere. Such competence requires understanding of what narrative archetypes are attractive to the audiences the campaigners wish to reach. Assembling facts and constructing a good story explaining them is not enough. The story needs to feel authentic to be persuasive. Crafting an authentic and persuasive message is difficult for a powerful state. After all, postmodernist war subverts the traditional advantages of hegemonic powers. Indeed, the logic of postmodernism is to challenge established power. Under the framework of postmodernist thought, audiences assume that all such powers have cynical agendas and are blind to injustice resulting from their policies. To overcome this difficulty, the powerful would be well advised to enlist coalitions and international institutions, to seek to empower and strengthen the legitimacy of these actors, and to create hegemony by consensus. In this regard, power derives from having the largest proportion of people and institutions that share one's understanding and belief about the meaning of conflict.

Urban terrain is alive and malleable. A city is concrete and steel but also the network of humanity enmeshed within. It can be fashioned, reshaped. A powerful state might be able to cut new pathways through the terrain to avoid ones that have been turned into kill zones. A clever nonstate actor can exploit the unseen, tunneling below the surface and into its enemy's psyche. Yet, despite the malleability of urban space, reconfiguring it carries consequences. Each structure destroyed and every cynical exploitation of a protected site creates dozens of civilian victims whose suffering is neither hypothetical nor merely regrettable—it is tragic. The accumulation of so much tragedy creates liabilities for an actor competing for the perception of legitimacy. Thus, it is at once a humanitarian and a strategic concern.

Common interpretations of the law of armed conflict cede advantages to substate actors in the urban fight. The law of armed conflict is highly contextual and despite the best efforts of its authors to minimize suffering contains exploitable ambiguities.[1] Urban battlefields, either by design or by happenstance, create the utmost confusion and the utmost opportunity for belligerents to exploit the limitations of this legal framework. Moreover, while the law of armed conflict historically have privileged uniformed combatants, urban battlefields negate this privilege.

In view of these difficulties, powerful state actors must grapple with the consequences of civilian casualties. While in the view of some legal experts, creating these casualties does not necessarily constitute war crime, it may still create strategic liabilities, moral hazards, and epistemic losses.[1] The world is watching, and adversaries are ready to pounce at mere appearances. We may bemoan as unfair the fact that states are held to a higher standard than substate actors, yet it remains a fact. An ideal of "courageous restraint" calls on states that may

be able to justify legally a military strike to think twice about the longer-term consequences.[1] Soldiers may indeed pay a price for this principled restraint, but the operative logic is that the conflict may be brought to a more definitive conclusion if external audiences are convinced of the righteousness of one's behavior. The war fighter must ponder tactical choices, asking, even if something is legally permissible, is it wise?

NOTES

1. Emile Simpson, War from the Ground Up: Twenty-First Century Combat as Politics (New York: Oxford University Press, 2012), 31–35. He goes on to argue that rather than a boxing match with established rules and impartial judges, war resembles a street fight, where belligerents do not agree on a set of rules and there are no officials to arbitrate the outcome. Moreover, noncombatant audiences are not simply bystanders but participants who interpret and impart meaning to the war.

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23. Cordesman, "Gaza War," 40.

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EDWARD SALO

11

HUMAN SHIELDS, CRATERING THE STREETS, AND WATCHING FOR DRONES

Urban Warfare Lessons from the Battle of Raqqa

IN 2004, the year after the U.S.-led coalition invasion of Iraq, a new terrorist organization emerged from the ongoing insurgency, one that would remain active in Iraq and Syria for the next fifteen years. Remnants of Abu Musab al Zarqawi's al Qaeda in Iraq (AQI) formed the Islamic State—also known as ISIS, ISIL, IS, or Daesh—as a response to the U.S.-led invasion. The American surge in forces in 2007 slowed Islamic State's growth; however, by 2011, the organization had once again gathered support—indeed, expanded it—taking "advantage of growing instability in Iraq and Syria to carry out attacks and bolster its ranks."[1] To reflect its military and political successes, in 2013 the group changed its name to the Islamic State of Iraq and Syria (ISIS) and the next year launched an offensive campaign in Iraq focusing on capturing the cities of Mosul and Tikrit. A U.S.-led coalition struck back at ISIS in Iraq in August 2014 and the next month began targeting its forces in Syria, primarily using air strikes. On October 15, U.S. Central Command (CENTCOM), the joint combat command responsible for operations in the Middle East, launched Operation Inherent Resolve against ISIS, involving over eight thousand airstrikes in Iraq and Syria in its first year. ISIS suffered key losses along Syria's border with Turkey, and by the end of 2015 Iraqi forces had made progress in recapturing Ramadi. But

in Syria, ISIS made gains near Aleppo and continued its firm grip over Raqqa and other strongholds.

BATTLE OF RAQQA

Map redrawn from "Conflict Monitor: Territory Assessed as Credible on 3 July 2017," IHS Markit, available at https://www.bbc.com/news/world-middle-east-40495039

In 2015, ISIS expanded into a network of affiliates in at least eight other countries, thus enabling its branches, supporters, and affiliates to conduct with increasing facility attacks beyond the borders of its socalled caliphate. In October, ISIS' Egyptian affiliate bombed a Russian airliner, killing 224 people; on November 13, 130 people were killed and more than three hundred injured in a series of coordinated attacks in Paris; and in June 2016, a gunman who pledged support to ISIS killed at least four dozen people at a nightclub in Orlando, Florida.

Despite its expanding fortunes, by December 2017, Islamic State had lost 95 percent of its territory, including its two biggest territorial possessions: Mosul, Iraq's second-largest city, and the northern Syrian city of Raqqa, the nominal capital of its "caliphate."[2] The struggle between Islamic State and its various rivals drew a whole array of actors into operations in the urban environment: Syrian government forces, various militia groups opposed to the Assad regime, Kurdish irregulars, Russian forces, and U.S. and British special forces.

This chapter will focus on the urban operations conducted in Raqqa to clear the city of ISIS fighters, for whom Raqqa was critical as an urban center that—like Mosul, Ramadi, and Fallujah in Iraq—possessed an alienated Sunni majority.[3] Among other features of the struggle for Raqqa, this chapter will explore the unconventional and asymmetric capabilities employed by the Islamic State: improvised explosive devices (IEDs), vehicle-borne improvised explosive devices (VBIEDs), improvised armed drones, conventional defensive positions and obstacles in urban environments, and human shields. Furthermore, this chapter will explain how IS fighters made use of the Syrian urban environment, maintained an effective support network, and blended with the local population to confound their opponents. Finally, it will examine the role of American and other intelligence, in particular human intelligence (HUMINT), as a key element in identifying hostile individuals, enemy positions, communications centers, and arms dumps, which coalition forces could then target with either ground forces or precision air strikes.

Much like the horrific landscapes of fought-over cities in Europe during World War II, Raqqa during the fighting exemplified the terrors faced by civilians and combatants in large urban areas. Two journalists, Quentin Sommerville and Riam Dalati, described Raqqa in a report for the BBC: "Raqqa is the doomsday city. Danger lies around corners and in the shadows. It comes from distant snipers, hidden bombs, and the deep tunnels that riddle the city.… There are fewer direct attacks and car bombs in Raqqa than there were in Iraq's Mosul.

Here, it's the snipers and the roadside bombs that do the work. Mostly, IS doesn't move, but lies in wait."

The battle of Raqqa was fought between the Syrian Democratic Forces (SDF), backed by a coalition led by the United States (over eighty nations and institutions), of which the United States and the United Kingdom largely constituted the military component and the Islamic State of Iraq and Syria in the last half of 2017. The SDF was made up of Kurdish and Arab fighters, the former supported by coalition air operations. The battle for Raqqa, as the capital of the new caliphate, was critical for the defeat of ISIS in Syria. However, at the same time anti-ISIS forces were engaged in combat in Iraq and other parts of Syria to remove ISIS from the region. The battle of Raqqa was described by RAND Corporation (a U.S.-based think tank specializing in military and security issues) as fought not to push ISIS out of the city but to eradicate it.

The battle began on June 6, 2017, with U.S. airstrikes on ISIS positions surrounding the city. Since the fall of Raqqa in 2013, ISIS had been fortifying the city against attack, creating fighting positions in many buildings and other areas that were to make urban fighting there, as described by one American commander, the most intense since World War II. After the initial airstrikes, the SDF attacked the city's outskirts in the north, east, and west, capturing villages and towns. Over the next week the SDF continued seizing outlying areas until June 10, when it reached the suburb of Roman and met heavy resistance from ISIS. There followed, over the next few months, slow, house-to-house fighting, as the SDF had to retake every neighborhood and push out ISIS forces.

On June 30, ISIS forces counterattacked against the SDF with VBIEDs, suicide bombers, and snipers, causing units of the SDF to retreat from the al-Sinaa neighborhood. However, by early July the SDF was again on the offensive, reaching Raqqa's old town. By the end of the month the fighting had become completely urban in nature, house to house, with no real front line but pockets of action all over the city. To protect the old town and to lower the chance of civilian deaths, the SDF focused instead on ISIS pockets in the western and southern parts of the city, so as to isolate the old city until later in the operation. By early August the SDF had captured over half of Raqqa and was receiving new forces to enter the fight. Through the rest of the month the SDF, supported by U.S. helicopters, continued its push to unseat ISIS from the old city and by the first of September had secured it. The rest of September was spent clearing out the northern part of Raqqa and other strongholds in the city.[1] On October 15, the SDF agreed to allow ISIS to evacuate 3,500 family members and several hundred fighters out of the city.[11] Over the next five days the SDF crushed all remaining resistance in Raqqa and on October 20, 2017, declared victory.

The battle for Raqqa was a meatgrinder for both sides, killing approximately a thousand SDF fighters and over three thousand ISIS militants, not counting thousands of civilian fatalities and injuries. In addition, over 80 percent of the city was damaged or destroyed by combat.[12]

THE USE OF SVBIEDS IN RAQQA

The Modern War Institute at West Point stated that "SVBIEDs [suicide vehicle-borne IEDs] are perhaps the best known and most feared of IS weapons."[13] In defensive urban combat IS employed SVBIEDs as momentum breakers, to stall attackers' advances, and as one (not the only) method of staging attacks behind enemy lines. The SVBIED designs used by ISIS during the battle of Raqqa largely echoed those it employed in its defense of Mosul, including a variety camouflaged to look like a civilian or commercial, not military, vehicle. In Raqqa, however, ISIS utilized another type of SVBIED as well: one equipped with interior armor but camouflaged to mimic an ordinary automobile. In these members of ISIS could travel easily through the city without their vehicles being identified as mobile platforms full of explosives.[1]

During the battle of Raqqa, ISIS would sometimes pair its SVBIEDs with an ISIS-operated quadcopter drone providing aerial overwatch like they had done in Iraq. These drones would send real-time imagery back to headquarters and relay its radio communications to the SVBIED drivers "direct[ing] them around roadblocks and [furnishing] new threats in real time, often circumventing … army defenses and striking columns of armored vehicles from directions thought to be secured."[1]

SVBIEDs served several functions for ISIS—above all, to inflict massive casualties on coalition forces but also to spread terror among civilians. ISIS did not possess heavy weapons—e.g., aircraft, artillery, tanks, armored personnel carriers (APCs)—but SVBIEDs supplied the "shock and awe" that such weapons would have. Indeed, RAND described SVBIEDs as having a "devastating physical and psychological effect" on coalition personnel.[1]

Before the battle of Raqqa, ISIS released a propaganda message stating its intention to deploy SVBIEDs and other improved weapons against its opponents. Patrick Tucker of Defense One reported that according to an unidentified ISIS military commander,

Coalition forces should expect to encounter more improvised explosive devices, or IEDs, in houses, a tactic he called "among the most successful means of defense against the advance" of the coalition forces who took Mosul, Iraq, earlier this year. The commander also promises wider use of vehicle-borne IEDs—cars and trucks loaded with explosives—and claims that ISIS has segmented Raqqa into "small sections that could function individually in emergency situations and could independently pursue their objectives." Most importantly … the Islamic State might unleash "other types of weapons which Allah has bestowed upon the Mujahidin [Islamic fighters] and which we have not yet revealed."[1]

Coalition forces targeted both SVBIEDs and their points of production (about which more below), but during the battle ISIS produced at least 125, of which the coalition forces destroyed only eighty-four, and was able to continue producing them until the last week of fighting. This would indicate that they possessed a large number of hidden workshops and factories spread throughout

Raqqa and were remarkably, though not entirely, successful in keeping them safe.[1] To counter SVBIEDS, the coalition used several tactics, some of which had been developed during the fighting in Mosul. The first was a continuous presence in the air over Raqqa, with aircraft available to destroy SVBIEDs shortly after detection. In addition, intelligence gathering enabled coalition forces to acquire accurate information on sites connected with the construction of SVBIEDs, thereby facilitating the targeting of both the vehicles and the workshops that armed them. This technique resulted in the destruction of twenty-one SVBIED factories during the battle. Also, air strikes and artillery would crater roads to hinder or prevent the movement of ISIS SVBIEDs, and the SDF constructed roadblocks from abandoned cars and construction material from damaged buildings.[1]

ISIS MOBILE OPERATIONS IN RAQQA

While SVBIEDs were its primary vehicle-based weapon in Raqqa, ISIS had begun its campaign in Syria in 2011 with other capabilities. Unlike many other irregular or asymmetric belligerents, ISIS at first had its access to more than two hundred Russian tanks and around fifty Russian BMPs (infantry fighting vehicles) captured in Syria from government forces. Likewise, it possessed American vehicles captured in Iraq from the U.S.-equipped Iraqi Army.[2] These heavy weapons initially allowed ISIS to face Syrian and Iraqi conventional forces in battle as a peer early in the conflict. The coalition introduced airpower in 2014, however, with which it quickly targeted and destroyed ISIS armored forces, removing them as assets in the urban fighting that was to follow.[21]

Owing to the shift in ISIS' campaign to the defensive in Syria and to overwhelming coalition airpower, ISIS forces in Raqqa relied on infantry as their primary fighting force, with support from a limited number of small vehicles, such as motorbikes and motorcycles, that provided speed and maneuverability in combat and facilitated the movement of small numbers of troops through the city streets (and made such movements more difficult to track). Quite apart from transport, motorcycles enabled ISIS "to carry out assassinations, plant improvised explosive devices (IEDs) and undermine security in the eastern province."[22] Motorcycles and motorbikes proved "affordable to purchase and operate and [did] not use much gasoline."[23]

ISIS also fielded some locally produced, improvised armored personal carriers (APCs), together with "technicals"—the pickups equipped with heavy machine guns or autocannons common throughout the Middle East and Africa. Reporters commented that ISIS "borrowed a practice that U.S. troops employed in 2003, fusing scrap metal onto their un-armored vehicles to guard against the then-new phenomenon of roadside bombs."[2] The fitting of armor plate (be it true armor or just scrap) to vehicles for protection dates back to the origins of military vehicles. ISIS' small workshops could convert "any truck—and even tractors and construction vehicles—into weapons of war."[2] The primary factory, "The Workshop," was situated in Raqqa. The Dutch open-source analysts Stijn Mitzer and Joost Oliemans report that it "produced a wide variety of profes-

sional designs that could even be said to be on par with upgrades conducted by professional arms industries throughout the world."[2] In addition to improvised APCs, coalition forces encountered ISIS fighters using "truck-mounted artillery" that had been hidden in garages or under homemade camouflage netting to protect it from air strikes.[2]

While these technicals were mostly used to bring troops to battle or support them, ISIS also employed them with VBIEDs in combined assaults on coalition forces. For example, a VBIED would drive into a coalition line of defense and detonate a bomb; a technical would drive through the gap it made before opposing forces could bring forward reinforcements. The coalition quickly adapted to this tactic by employing rocket-propelled grenades (RPGs) and other shoulder-fired antitank missiles to strike VBIEDs and technicals before they could deliver their explosives. Furthermore, drones and other reconnaissance assets allowed coalition forces to observe approaching VBIEDs and technicals and successfully engage them from the air.[2]

Finally, ISIS piled vehicles, both damaged and intact, on the sides of roads in towns and cities to direct enemy forces "through a single, narrow path—one that's either lined with improvised explosive devices, if the cars themselves aren't packed with explosives. Or a sniper might lie in wait, sights trained on that narrow entry point."[2] While not unprecedented in an urban warfare context, this tactic found favor with ISIS, which utilized it effectively to slow the advance of coalition forces and oblige them to commit additional resources for their own protection during routine troop movements.

IMPROVISED ARMED DRONES

As previously mentioned, coalition air assets, both fixed- and rotarywing, provided anti-ISIS forces with vastly superior firepower, as well as flexibility on the urban battlefield. Specifically, the air supremacy the coalition enjoyed offered its ground commanders unparalleled battlefield reconnaissance, rendering nearly useless any conventional former military armor that ISIS could deploy either within or beyond the urban environment. Again, it should be emphasized that this circumstance was hardly unprecedented; Western militaries have enjoyed air superiority—if not actual supremacy—in almost every conflict since World War II.[3] Many military historians credit air supremacy for the astonishingly rapid and decisive defeat of the Iraqi army during the closing phase of the Gulf War in February 1991, for contributing to the defeat of the Taliban in Afghanistan in 2001, and for quickly overwhelming Saddam Hussein's forces in 2003. While most of these actions did not feature the level of urban fighting later witnessed in Syria, analyst Alexander Harper, of the Lowry Institute, argues, the successful use of drones by ISIS in Syria inaugurated a new era: "The now regular appearance of cheap, often commercially purchased drones in the hands of non-state actors marks a shift in modern asymmetric warfare. Non-state groups today have access to the kind of operational awareness previously held only by state militaries."[31]

While not having the air assets or trained personnel to maintain a conventional air force, ISIS developed its own, which gave commanders critical intelligence through reconnaissance of the urban battlefield, as well as a degree of close air support (via drones purchased on the open market). ISIS thus possessed "a tactical-level air force capability that many states did not even possess 10 years ago."[32] Commercially built drones, ranging in cost from several-hundred-dollar quadcopters to $1,500 Chinese-made DJI Phantoms, enabled ISIS to mimic, to a limited degree, the air superiority enjoyed by American allies since the Korean War. By 2017 ISIS was launching between sixty and one hundred drone attacks per month in Syria and Iraq, "destroying at least 56 Iraqi military vehicles and killing or wounding more than 100 Iraqi soldiers."[33] In the summer of 2017, for instance, the Washington Post reported on an Iranian Shahed-129 that had attempted to attack U.S. special operations forces in al-Tanf; a U.S. Air Force F-15E later shot it down. The mission, while a failure, nevertheless underlined by extension the fact that coalition forces were vulnerable to large drone attacks, which could occur on any battlefield.[3] Conversely, that conventional fighter aircraft were able to neutralize this attack demonstrated the continuing critical efficacy of the manned fighter on the battlefield.

To confuse coalition antidrone operations ISIS employed yet another tactic: to "wait for the SDF to send up its own drone before deploying an aircraft loaded with explosives so that those on the ground think a friendly drone is overhead."[3] This technique took advantage of the coalition's virtual monopolization of the air, encouraging the false and dangerous assumption that any aircraft was necessarily friendly.

Economic embargos and other factors obliged ISIS in Syria also to use improvised aerial weapons, drones that basically amounted to "flying IEDs," to threaten coalition bases and lines of communication.[3] Such an attack could involve little more than strapping explosives to a drone and flying it into a target, whether fixed, a convoy, or a troop concentration. Some ISIS bomb makers in Syria even developed a system for dropping grenades from small drones. Later, the U.S. Army's Asymmetric Warfare Group experimented with similar improvised systems and analyzed in that connection the capabilities of drones. Its "Threat Evolution" trials program in Virginia devised drones capable of "bombing vehicles and mock human targets with live improvised attack drones to ramming unmodified drones into military vehicles."[3] These experiments, based on a combination of imagination and actual experience in Syria and Iraq, served to shape and inform American responses to the drone threat.

In Syria, the coalition relied primarily on American technology and tactics to counter drones. The U.S. Army fielded vehicle-mounted anti–unmanned aerial vehicle devices, or AUDs, on the front lines, as well as other devices "designed to disrupt the control signal sent to the aircraft"—which, however, would also jam communications devices used by coalition forces. As previously mentioned, the coalition also employed airpower to track and target ISIS drones, assigning existing antiaircraft weapons and combat air patrols to destroy them.[3] In addition

to combat and surveillance, ISIS used drones in its propaganda campaign, capturing exploitable video footage of operations or incidents. That footage could then be distributed worldwide via social media in major information warfare campaigns.

Notwithstanding, while drones in Syria revealed many applications in an asymmetrical battlespace, they appeared actually to have been of limited use to ISIS. Emil Archambault and Yannick Veilleux-Lepage, both then postdoctoral fellows, argued in 2020 that "ISIS' tactical use of drones is of limited military value, and … its objective is to demonstrate a capability to use airborne technology rather than to achieve a definite military advantage.… The symbolic use of drones … [including] ISIS' extensive use of unarmed drones, both as a means of conducting preattack reconnaissance and to film ground operations –particularly the use of vehicle-borne improvised explosive devices (VBIEDs)—treat[ed] drones as an integral instrument within the ISIS propaganda machine, and as weapons within a political and strategic struggle."[3] Nevertheless, and whatever the tactical success of drones on the battlefield, their employment in Raqqa offers lessons for future urban environments.

CONVENTIONAL DEFENSIVE POSITIONS AND OBSTACLES IN URBAN ENVIRONMENTS

The urban nature of many of its battles had given ISIS plenty of opportunity to prepare for combat in cities by stockpiling supplies, producing weapons, and preparing defensive positions. Because of Raqqa's importance to the caliphate, ISIS forces constructed there "extensive defensive lines on the edge … involving barricades, trenches, and berms." These "defensive lines were meant to make it more difficult for opposing forces to enter the city, but, like individual barricades within the city, the lines were only effective when covered with fire." Indeed, impressive though such defenses may have appeared, ISIS could not man such extensive positions, only those sections they believed vulnerable, redeploying forces as needed. In the event, as a study by the Modern War Institute argues, conventional defensive lines in Raqqa generally "were ineffective at preventing attackers from entering the city. Barricades inside the city were sometimes more effective but they were still relatively easy to remove using bulldozers, heavy weaponry, or even airstrikes." [1]

The conflict in Raqqa exemplifies the reasons for a renewed focus on the protection of cultural heritage during combat. ISIS' defensive strategy there involved the use of and damage to the Rafiqah Wall, a seventh-century structure built to protect the city's garrison during the reign of al-Mansur, the second Abbasid caliph, who helped found Baghdad. Now, 1,300 years later, the wall slowed the progress of coalition forces. CENTCOM stated that ISIS forces made the wall a combat position, planting mines and IEDs. ISIS had already, during its occupation of Raqqa, vandalized and targeted the Rafiqah Wall and other heritage sites as a way of attacking the morale of the citizens and imposing their own view of Islam on the populace. [2]

In June 2017, American-led forces concluded that the best means of dealing with the Rafiqah Wall was to open with air strikes two twenty-five-meter corridors through the structure. An American military spokesman stated, "Unlike ISIS who deliberately destroyed the ruins of Palmyra and the Al-Nuri mosque and uses sites such as the Rafiqa Wall, hospitals, schools and mosques as weapons storage facilities and fighting positions, coalition forces are making a great effort to protect civilians and preserve these sites for future generations." [3]

The use of the culturally significant Rafiqah Wall as a defensive position and the coalition's decision to attack it highlight one of the major dilemmas of operations in ancient cities. While coalition forces sought to adhere to the many international treaties that protect cultural heritage sites in times of conflict, ISIS and nonstate groups are not parties to them and do not respect their rules. ISIS' use of the historic wall to defend its forces was tactically sound but violated the norms of modern warfare. Coalition forces faced an issue analogous to those that confronted American forces during several campaigns during World War II: Would the destruction of parts of the wall accelerate the pace of operations and reduce casualties? Total destruction of the Rafiqah Wall by coalition forces would feed ISIS' narrative of Western forces destroying Islamic heritage: "The wall and the gate are major surviving monuments dating back to [Raqqa's] great Islamic past," as Amr Al-Azm, a former Syrian antiquity official, has asserted. The coalition settled on the destruction of two small portions of the wall as a regrettable but necessary expedient: "The most humane way to save the people of Raqqah," it was claimed, "is to swiftly and decisively defeat ISIS."

As other ways to slow the attackers ISIS also utilized barricades and also "hung [large sheets] horizontally from building to building to obscure aerial observation. While these were taken down before the start of the battle, IS used smaller sheets of tarpaulin during the fighting to hide vehicles and weapon positions." Naturally, sheets and tarpaulins failed to confound thermal sights and other devices.

In an analogous attempt to allow its forces to move around the city without detection by aerial reconnaissance, ISIS developed a series of tunnels and other covered ways. Jac Holmes, a British national fighting for the SDF, stated in an interview that ISIS was using tunnels to move soldiers and supplies under positions the SDF controlled: "They have a lot of tunnels, they can pop up from behind us at any time.... It is very dangerous." The digging and use of these tunnels by ISIS destroyed much of the city's sewer system and spread rats and other disease-carrying vermin. Nevertheless, ISIS used tunnels not only for movement but for housing troops and stockpiling materiel. The tunnel system even contained sleeping quarters and medical stations. It is possible that ISIS used tunnel warfare tactics from the Japanese in World War II and the North Vietnamese and Viet Cong during the Indo-China War.

Many of the tunnels were constructed by forced or poorly paid local labor. Hammad al-Sajer, a Syrian detained by ISIS, described the tunnels he was forced to construct in Raqqa as consisting of reinforced concrete and having

several rooms with electricity and stacked with munitions. Patrick Cockburn, a British journalist, described the importance of the tunnels: "The network of tunnels connecting up bunkers, hideouts and hidden escape routes is the key to the resistance. IS fighters are able to move swiftly underground, shifting positions before they can be detected and eliminated by bombing or shellfire." Many tunnels were booby-trapped.

USE OF HUMAN SHIELDS

Just as ISIS did not protect Syria's (and Iraq's) cultural heritage during wartime, it also disregarded international-law norms for the protection of civilians. Indeed, rather than protect civilians, ISIS deliberately drew large numbers of civilians in Raqqa unwillingly into their military operations, interspersing their fighters among them in order to complicate the coalition's efforts. [1] "While withdrawing from a district of Manbij, Daesh jihadists abducted around 2,000 civilians from Al-Sirb neighbourhood," Sharfan Darwish, SDF spokesperson told the Agence-France Presse news agency. "They used these civilians as human shields as they withdrew to Jarabulus, thus preventing us from targeting them," adding that women and children were among those taken. [2] Coalition commanders stated bluntly, "The jihadists are using the civilians as human shields to block our advance." [3] American counterterror special envoy Brett McGurk said thousands of ISIS fighters remained in the city and were using the estimated 25,000 civilians on the ground as human shields.

One account of ISIS' human-shield techniques illustrated the cruelty of the organization:

Yazidi sex slaves have been forced into underground ISIS prisons and literally draped over their captors as protection against coalition strikes. Several survivors of such strikes have scars from absorbing the strikes. Entire families have been held hostage by ISIS operatives who take over their homes and shuffle them from place to place. If they don't play along, they're slaughtered on the spot. Female ISIS members have reportedly stooped to utilizing their own babies: They have been known to carry their infants to appear to be harmless mothers and thus avoid being attacked. And in remaining strongholds such as Raqqa, ISIS has pushed civilians into the city's center to live in tents on the street and thus act as one giant shield to maintain domination over the heart of its "caliphate capital." A high-ranking Iraqi military official confirmed numerous instances of ISIS "using human shields and fighting from civilian homes, mosques, hospitals and schools."

However, launching attacks from civilian-centric locations was hardly the only way in which jihadist forces employed human shields. ISIS forces, for instance, "entered residents' homes by force and used them to conceal their movements and as firing positions against SDF lines. … [They also] imposed [a dress code] on civilians and IS fighters alike, [making] it even more difficult for SDF and coalition forces to distinguish between them." That is, ISIS required all males to wear the jihadis' garb of baggy pants and long shirts, making it difficult for

coalition forces to distinguish between members of ISIS and civilians. Finally, Karim Aljobory of the Iraqi Counter Terrorism Forces, claimed that ISIS placed "suicide belts … on to helpless civilians—including women and children … [which caused] a big dilemma. We didn't know who was a bomber and who was not. Many of our men died from these people forced to be bombers."

Even in retreat from urban areas, ISIS would lay minefields, set booby traps, and prevent civilians from escaping. Faced with the prospect of being used as human shields, some residents of Raqqa and other towns attempted to pay smugglers to remove them to places of safety. The smugglers, many of them ISIS members, knew which streets were free of mines, where snipers were, and the sites of major engagements in progress. These smugglers charged several hundred American dollars per person for safe passage, a price simply beyond the means of most people. Many of those unable to pay who attempted to flee unaided, to be killed or injured by mines or IEDs. Members of ISIS too extorted money from civilians with threats of using them as human shields. [1]

The use of human shields did prove partially effective. At the town of Baghouz two years later, for instance, the SDF had to halt its offensive against ISIS forces because "the jihadists are increasingly using civilians as human shields to block the advance." [2] This tactic slowed coalition forces in a variety of ways. According to Mubin Shaikh, a counterterrorism expert on ISIS for U.S. military and nonmilitary agencies, ISIS fighters would occupy civilian homes, lay booby traps within them, then place civilians inside, in the knowledge that coalition forces were targeting such structures. ISIS would then, Shaikh stated, "trigger a secondary explosion so the military is left dealing with an investigation of women and kids killed." [3] Footage of coalition forces killing civilians, as it would have appeared, would well serve the ISIS propaganda campaign.

Increasing reliance by the coalition in Raqqa, Mosul, and other urban battlefields in Iraq and Syria on airpower and long-range artillery wrought greater destruction on these cities and produced larger numbers of civilian deaths. Quentin Sommerville, the BBC's veteran Middle East correspondent, reported extensively from both Raqqa and Mosul: "I would say in Mosul artillery and airstrikes were in most cases a last resort.… In Raqqa, they seemed like they were used first." During the five-month campaign to capture Raqqa, the coalition launched more than 20,000 shells and missiles into the city and its aircraft carried out almost 4,500 air strikes. U.S. Air Force A-10 ground-attack aircraft accounted for almost 44 percent of the early sorties, later to be supplemented by Reaper drones, B-2 and B-52 bombers, F-15 and F-16 fighters, and long-range artillery.

Lt. Col. Craig Morash, commander of the 74th Expeditionary Fighter Squadron, described the use of airpower thus: "The fight itself was within the urban complex of Raqqa and the pilots had to get creative to figure out ways to strike targets at the bottom of these five-story buildings.… Urban conflict, at least in this form, was kind of the first time anybody [i.e., in that squadron] had ever seen it before." Reliance on airpower caused heavy civilian causalities, aggra-

vated by the fact that ISIS employed human shields around their positions, as previously discussed.

The liberation of Raqqa from ISIS illustrated the adaptation of urbanwarfare tactics to a new, twenty-first-century context. The coalition's overwhelming superiority in firepower from two domains was somewhat offset by human shields and tunnels. The conventional forces with which ISIS had begun its campaign were quickly destroyed, obliging its fighters to adopt asymmetric tactics. While overwhelming firepower and better-equipped forces ultimately defeated ISIS, the Modern War Institute reminds American military personnel that ISIS had "developed a guidebook for groups fighting against superior adversaries, which means the likelihood they will be employed in urban environments in the future is high.… It is essential to learn about these tactics now in order to inform effective strategies and tactics to counter them, rather than waiting until soldiers find themselves on an urban battlefield, with enemy fighters emerging from tunnels directly into the buildings they occupy, drones attacking from the skies, and waves of SVBIEDs hurtling toward them."

The fighting in Raqqa exemplified the terrors faced by civilians and combatants in large urban areas. Western nations, especially NATO countries, must realize that their military doctrines, designed for peerto-peer fighting, will not work in urban battlefields. Massive airpower and firepower may ultimately produce success, they will do so only at the cost of widespread death and destruction among noncombatants. The lesson learned in Raqqa is that conventional weapons and tactics will not alone be sufficient to win on the modern urban battlefield. That environment will force armies to think in terms of unconventional and asymmetric combat, notwithstanding that the U.S. military seems to be turning away from irregular warfare, to judge by the disbanding of the Army's Asymmetric Warfare Group.

In Raqqa, ISIS showed that a smaller force can develop weapons, such as VBIEDs and improvised explosive-carrying drones, and use the urban terrain, including heritage sites and civilians, to hold off a larger, better-equipped military. However, Western nations can adapt their traditional strengths, including airpower and intelligence gathering, to fighting in an urban space. Western armies need to train in such environments and understand how to use combined arms (i.e., drones, airpower, artillery, unconventional and conventional forces) as a team. Extensive training in urban areas will teach armies and their commanders not to fear cities but to respect them. [1]

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CONCLUSION

LESSONS LEARNED

BASIC CHARACTERISTICS OF URBAN WARFARE

As no two urban operations feature identical characteristics, one must learn and adapt as circumstances require, improvising where necessary. One must apply doctrine, training, experience, and the study of past operations to suit each unique situation while appreciating that no historical precedent provides an ideal, parallel solution. That said, the case studies examined in this work reveal a number of basic lessons common to nearly every urban operation:

Urban fighting makes extraordinary physical and psychological demands on the troops involved, above and beyond those experienced in the field.

Fighting in built-up areas is extremely manpower-intensive, often requiring a disproportionately heavy ratio of attackers to defenders. At the end of the day, the enemy must be defeated by overwhelming firepower and “boots on the ground.”

All urban battles involve grim, close-quarter struggles in rooms and other confined spaces, often in tandem with operations in wider spaces outside the city.

Defending forces will seek to rob the attacker of his momentum and to wear it down through attrition, almost certainly by establishing complex positions involving interlocking fortified strongpoints anchored in naturally defensible

ground. Rendering the fight prohibitively costly to the attacker is the defender's primary objective.

Heavy weapons and airpower play an important and, at times, a decisive role.

Social media can profoundly influence public perceptions, requiring that a careful counterargument be presented. A global audience is involved in the "information battlespace."

While urban operations can inflict greater casualties than does fighting over open ground, this is not universally the case. Exposed positions can and do produce high casualty rates among troops operating in a town or city. Conversely, an attacker can make use of an abundance of cover even while his opponent naturally does the same. In short, expelling or destroying a defender need not entail prohibitively high losses to an attacker.

Whether in attack or defense, troops must be armed and equipped for the specific task in hand—anything from specialized small arms to heavy weapons, and from amphibious vehicles to helicopters.

A skillful defense is best overcome by close coordination between units and subunits involving a combination of key factors: an integrated, combined-arms approach; strong motivation at the junior-leader level; copious initial ammunition supply and unfettered resupply; and tactics that enable infantry to avoid canalization and exposure to fire in open streets.

GENERAL POINTS RELATED TO THE DEFENDER

Through deliberate destruction, the defender may seek to deny possession of key assets, such as vital road junctions, communications hubs, port facilities, the water supply system, and electrical-power stations.

Irregular forces will endeavor to compensate for the superior firepower, training, organization, logistics, weapons, and other advantages accruing to a conventionally armed attacker by means of speed, surprise, effective coordination, and decisive blows directed at disorganized, weak, or otherwise vulnerable troops. Even a defender lacking doctrine, formal training, heavy weapons, and other assets may offer serious resistance. Those who underestimate the effectiveness of highly motivated, well-entrenched defending forces, whether unconventional or conventional, do so at their peril.

While lightly armed defenders may not possess the benefits conferred by heavy weapons, their ability to move easily and rapidly from point to point partially mitigates this disadvantage. Moreover, the facility they enjoy to assemble undetected to prepare for contact with the enemy and to strike without warning helps confound the attacker's efforts to fix and destroy them, thus compensating to varying degrees for the defender's inferiority in other dimensions of combat power.

Defenders often demonstrate an extraordinary capacity to rally, reorganize, and resume the struggle even in the face of severe localized setbacks.

Rather than establishing defenses in depth, defending forces may attempt to hold more ground than their resources justify, rendering their positions weak at multiple points and therefore potentially untenable.

Defenders will likely launch regular counterattacks to prevent the attacker from consolidating captured ground, reorganizing, or sustaining the momentum of the assault. Counterattack in combination with a fluid, as opposed to a static, defense tends to serve defenders best.

Tunnels, sewers, and other subterranean passages add a third—that is, in addition to ground and air—dimension to the urban battlespace, allowing defenders protection and concealment as they move across potentially wide swathes of a city to establish themselves in new positions. Subsurface operations also allow runners to pass messages between commanders and furnish a safer means for movement of casualties and supplies.

Resolute defenders may be prepared to accept high casualties—in rare instances even annihilation—and heavy equipment losses in holding their ground. Well-led defenders enjoying high morale rooted in an enthusiasm for, and deep commitment to, their cause and operating on ground familiar to them may display fanatical, even reckless, courage.

GENERAL POINTS RELATED TO THE ATTACKER

Given the prevalence of restricted observation and fields of fire, understanding the geography of the city in question is vital.

Troops require specialized training and should be led, where possible, by those with combat experience.

Relaxing the pressure on the defender risks stiffening his resolve. Continuous attack fixes defenders in place, rendering them less able to reorganize, redeploy, offer a cohesive defense, or avoid encirclement.

Attacking forces should expect to encounter a defense in depth, requiring the systematic destruction of buildings and strongpoints by a combination of properly coordinated direct and indirect fire. Even the most meticulously organized defenses can be neutralized by these means.

Troops must occupy and secure captured positions, thereby denying the enemy the opportunity to reoccupy them.

By seizing major lines of communication, an attacker may isolate adversaries into pockets of resistance, thereby hampering their ability to offer a coordinated defense.

Physical and mental exhaustion may render any pursuit of a retreating enemy impossible.

Always bear in mind the adage, “No plan survives contact with the enemy.”

KEY LESSONS LEARNED APPLICABLE TO ATTACKING FORCES

Isolate and Infiltrate the Area of Operations

Encirclement and isolation not only hinder enemy reinforcement or retreat but afford the attacker freedom to maneuver around the perimeter of the urban area. The threat of encirclement may, in tandem with continuous pressure from within an urban environment, convince the enemy to withdraw altogether.

Forces deployed outside the urban battlespace may be required to support operations within by sealing off routes available to the enemy for reinforcement and resupply.

Infiltrating the enemy's defenses will encourage his withdrawal even while some strongpoints remain intact.

Failure to block all egress from a city may enable the enemy to escape and renew the fight later. Circumstances may nevertheless recommend such a course of action, thus sparing the attacker from the grim prospect of having to eradicate an enemy who, finding himself trapped, rejects surrender in favour of fighting to the death, thereby prolonging operations and increasing casualties on both sides.

If the defender establishes mutually supporting strongpoints, the attacker must isolate and seize or destroy them in turn.

House Clearance

Houses must be cleared in a thorough and systematic fashion. In a multistory structure, an assault from above provides both a physical and psychological advantage, since it imposes on the defender a greater sense of vulnerability: throwing a grenade upstairs, for instance, is inherently more difficult—and hazardous—than downstairs, and if driven downward the defender may flee into the street, where he is most exposed.

"Mouse-holing," creating holes between houses and buildings sharing common walls, has proven very effective in enabling infantry to advance through structures without exposure to fire in open streets and spaces. Rows of structures sharing adjoining walls best suit mouse-holing. Engineers are essential in blowing holes through interior walls—although any soldier with an antitank weapon can perform the task. Once a room is cleared, infantry posted at the windows can cover the house on the opposite side of the street. Mouse-holing tactics prove most effective when employed by combat teams comprising a range of specialisms and supported by a variety of weapons: infantry, engineers, artillery, antitank guns, mortars, and tanks. Maneuver and combined arms are decisive factors in success.

Identify and Seize Key Objectives

Establishing a secure foothold within the urban environment provides the basis for expanding further to destroy or expel the defender.

Elevated ground, whether natural or man-made, provides points of observation

of both the natural and urban landscape below—a commanding view that in turn facilitates fire. While narrow streets may preclude high-angle close support from field artillery or mortars operating from firebases outside a city, the same weapons, coordinating properly between themselves and firing in direct line of sight, can contribute critically to success, sparing the infantry much time-consuming, exhausting, and costly work.

If a defender recovers vital ground in a counterattack, the attacker must recapture it lest the initiative and momentum pass to the enemy.

Seizure of enemy command-and-control centers contributes to their isolation and the delayed (or denied) arrival of reinforcements.

Command and Control

The principle of mission command is critically important; spontaneous tactical decision-making must be encouraged at squad/section and platoon/troop levels. Junior officers must be free to shape operations in light of the circumstances immediately facing them, to call on firepower as discretion suggests, and to take advantage of opportunities as they arise. Small-unit initiative and superb leadership and motivation at the junior officer and NCO levels are essential, as subunit leaders play vital roles in maintaining the momentum of attack in this most challenging of operating environments.

Platoon- and company-level control of, and coordination with, support weapon crews—artillery, armor, and the like—is essential.

Effective communication between subunits from the section/squad level up to division level is essential to the proper functioning of command and control and the efficiency, rapidity, and security of the transmission of orders, information, and intelligence up and down the chain of command. Clear communication must also be maintained with forces in reserve, poised to reinforce or relieve those already engaged.

ARMOR, ARTILLERY, AND ENGINEERS

While effective use of firepower can substantially reduce casualties among attacking troops, widespread physical destruction remains the inevitable result, together with greater civilian casualties. Balancing the needs to mitigate civilian casualties and to employ essential firepower poses an unwelcome, sometimes unpalatable dilemma. Whatever compromise is reached, the presence of civilians will shape operational planning for good or ill.

Skilled engineers may be required, under fire, to clear large numbers of mines, IEDs, and booby traps from roads, houses, and assembly areas, and they require at times the cover of darkness to facilitate their work, some of it conducted by bulldozers.

Heavy weapons must form an integral part of any urban assault. Tank, artillery, antitank, and mortar crews can employ buildings as fire positions and observation posts to support infantry advancing along streets and assault positions, but

above all to destroy buildings in which the enemy is suspected or known to be present.

Tanks need not suffer heavy casualties. While narrow streets offer theoretically ideal conditions for ambushing mechanized and other vehicles at close range, control of elevated positions and the support of infantry employing suitable tactics can mitigate the threat.

Armor intelligently deployed can speed an advance and significantly reduce casualties. Employing their main armament, tanks can (like artillery) fire high-explosive or armor-piercing shells down roads, destroying barricades and bunkers in their immediate path, as well as eliminating piles of rubbish concealing mines, IEDs, or other explosive devices. Tank fire can also provide ingress to buildings for supporting infantry.

Tanks, antitank guns, and artillery can, with armor-piercing shells, collapse roofs onto snipers or other troops in the upper stories of defended positions. High-explosive rounds fired through windows and doors of a structure detonate in its interior, effectively clearing rooms from the top down prior to infantry assault. Lighter structures can be demolished altogether with heavy weapons or explosive charges.

By carrying forward ammunition, rations, and water and returning to the rear with casualties for medical treatment, armored vehicles offer a valuable option beyond mobile firepower.

Prepare for Counterattack

In the wake of a successful attack, relief forces must be ready to move forward and the timing and coordination of their arrival at newly captured objectives organized. Complacency has no place at this stage; so long as operations remain active, an objective seized remains vulnerable to recapture. Units must therefore possess flexibility to shift to the defensive to oppose counterattacks and the introduction of enemy reinforcements into the battlespace.

Friction

A myriad of factors may conspire to lengthen—or potentially foil altogether—the process of clearing an urban area. They include, among a host of other circumstances, the nature of the ground, the state of the weather, the state of and conditions on the roads, the strength of enemy resistance, the time required to coordinate fire between multiple units in various locations, the strength of the logistic chain, the state of constantly shifting morale, breakdown in radio communications, interruption in digital connectivity, and the delayed arrival (or nonappearance) of reinforcements. Contingency plans for such eventualities must be considered.

Intelligence

Proper reconnaissance of and accurate tactical intelligence on enemy positions are vital. Conversely, the poor exploitation or the absence of intelligence can

result in serious, sometimes disastrous, consequences.

Information Operations

Garnering moral and material support at home and abroad for operations in built-up areas depends on the careful management of information, including credible counter-narratives to "fake news," propaganda, and other forms of manipulated information released on social and mainstream media.

Logistics

Key roads, bridges, ports, or airfields may require capture to facilitate reinforcement and resupply and to deny the enemy the same.

The demand for ammunition becomes almost insatiable. To meet it, a logistic chain must be robust, efficiently sustaining this requirement, which will vary widely from small-arms ammunition, grenades, and antitank shells, to demolition charges, while at the same time delivering food, water, fuel, and a range of other lethal and nonlethal essentials to generate and sustain combat power in a confined area, potentially for several days in succession.

Resupply by air is fraught with difficulties and hazards. Both fixedwing and rotary-wing aircraft are vulnerable to ground fire or attack from the air, even with air superiority established. Misdirected drops into enemy-controlled areas and the limitations of weight associated with air as opposed to road transport impose further restrictions on the efficacy of airpower in an urban context. Controlling an airfield near or within a city, however, will greatly mitigate these liabilities.

Multinational Issues

As with all operations, urban or otherwise, that involve multinational forces, command and control may be complicated by different command structures, unit organizations, orders of battle, and differing—sometimes substantially diverging—approaches to strategy. Disagreement may similarly arise over such issues as doctrine, task allocation, the aims and objectives sought at the tactical and operational levels, or through cultural misunderstanding. There may exist a political imperative for including troops from partner nations when national homogeneity and a single overarching commander might have been the natural preference of the principal member of a multinational force.

Civilians

Civilians unwittingly caught, or otherwise choosing to remain, in contested areas will inevitably suffer heavily. A plan to evacuate and furnish medical aid to the civil population must be in place to alleviate such suffering.

Civilians in cities with populations hostile to the attacker may choose to support a defending force in practical, as well as moral, ways: constructing (and repairing) barricades and other defensive positions between buildings, digging

antitank ditches and tunnels, passing messages between combatants, engaging in the fighting itself, or by other means impeding the attackers' progress.

Total disregard for the lives of civilians—or perhaps a desire to quash all resistance regardless of the cost to the local population—may induce attacking (and sometimes defending) forces to ignore ethical principles altogether and deliberately seek the outright destruction of a city. Fanaticism unleashed in an urban context can produce horrific consequences for the populace—as well as for prisoners on both sides—including untargeted preparatory artillery bombardments, wholesale massacres, illegal use of human shields, or deliberate deployment of weapons in areas known to be densely populated. These practices in turn create a moral quandary for the attacker and an opportunity for the defender—that is, to exploit for propaganda value the civilian deaths inadvertently or needlessly inflicted by their opponents.

Humanitarian aid for the civil population must arrive in the immediate wake of battle and be sustained for the long term. The timely provision of food, water, and medical care, together with the evacuation of those most in need, constitutes merely the start of the massive relief effort that lies ahead. Plans must therefore be put in place in advance for rebuilding vital infrastructure such as medical facilities, water, gas, and electricity supply, communications (road, rail, telephone, Internet, and so on), housing, and, in due course, for reestablishing local government and reviving the local economy.

SUMMARY

Urban fighting is necessarily slow, but sound tactics applied in a methodical fashion can yield positive results, often with lighter casualties than those sustained in open ground. It is a myth that urban operations invariably produce disproportionate casualties, notwithstanding the exceptionally sanguine contests for Stalingrad and Berlin during the Second World War. Fire and movement should be closely coordinated in a combined-arms approach, with overwhelming suppressive fire brought to bear against the defender, the whole operation orchestrated by the relevant unit headquarters to facilitate rapid maneuver and neutralize strongpoints. Simultaneity is key: conducting attacks on multiple objectives in a coordinated manner and in a well-conceived sequence achieve the most effective result. Troops should possess specialized training and the level of skill necessary to outmatch the enemy at the tactical level with varied weaponry.

Even defenders whose forces are too small, weapons are too few, command and control is poor, tactical skills are limited, and for whom coordinating their attacks is a struggle, can—emboldened by high morale—offer formidable resistance, particularly when they possess such familiarity with the ground as affords them the advantage of surprise. Overcoming such a foe, whether a lightly armed irregular force or a conventional peer, depends on thorough planning based wherever possible on accurate human and signals intelligence, as well as on superlative discipline, training, leadership, and well-armed and amply

supplied forces employing combined arms in close coordination and in regular communication with one another. Compensation for the enthusiasm—even fanaticism—displayed by even the most formidable defenders may be found in numerical superiority and overwhelming firepower, the combination of which enables attacking forces—if themselves properly motivated—to maneuver and then engage the enemy at close quarters. Close coordination between infantry, armor, artillery, and air assets, in tandem with highly competent and experienced officers and NCOs, enables the attacker to seize and maintain the initiative, denying the enemy the opportunity to withdraw, reorganize, or reestablish an effective defensive posture—and therein lies victory.

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